The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

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Further Reductions in Crude Oil Prices

Average daily production in United States week ended July 26, 2,011,931 bbls. Gain over previous week, 5,155 bbls.

Quotations Lowered in Main Producing Areas. Production Again Gains Despite Curtailment Efforts

Highest daily average estimated production this year, week ended July 5, 2,019,095 bbls. Lowest, January 12, 1,871,143 bbls.

By Andrew M. Rowley

Further reductions in the prices of crude petroleum in the Mid-Continent area—the main producing section of the United States at this time—with an increase of more than 5,000 barrels daily in the estimated average production featured the past week in the crude oil situation. The Magnolia Petroleum Company announced a new schedule of prices effective last Saturady which carried a reduction of from 15 cents to 25 cents a barrel from previous quotations. On Monday of this week, the Prairie Oil & Gas Company reduced its quotations 15 cents a barrel on the low grade in its schedule, 20 cents a barrel on the middle grade and 25 cents a barrel on the top grade. This reduction was met immediately by practically all of the other major purchasing companies, the Prairie schedule being different from that of the Magnolia, the latter retaining its schedule as changed last Saturday. On Tuesday of this week the Ohio Oil Company reduced its prices on Central West crudes 25 cents a barrel and its Wyoming crudes 15 cents and Montana 5 cents.

The crude price reductions at this time can be interpreted in only one way—the major purchasing companies are determined the amount of crude petroleum they are holding in storage is sufficient and they will do anything necessary to keep from storing any additional large quantities. As has been stated in these columns frequently before, the recovery of the industry is dependent almost entirely upon a reduction in the quantity of crude and refined oils in storage. With production failing to show any signs of declining to any material extent and remaining at a level near the maximum needs of the country at this time, no substantial reduction in crude stocks can be expected. The same condition holds true of gasoline. More of that product is being manufactured than ever before and the quantity in storage is being held at an exceptionally high level.

Despite proration, curtailed buying and reduced prices, no let up was shown in Oklahoma during the past week either in production or development work, the output of the fields of that State showing a gain of nearly 5,000 barrels a day while important results were achieved in different areas. A completion in the Atlantic Pool south of Pawhuska was flowing 115 barrels an hour; a well was brought in in the Cromwell Pool which made 5,160 barrels in 24 hours and this pool was extended northward. The Josey Pool in Okfuskee County contributed a 1,000-barrel well while a westward extension to the Graham Field started flowing at the rate of 250 barrels a day.

The Richland district, near the Powell Field in Texas, from which much had been expected following its rather spectacular rise in the production column, showed a decline during the past week and operators now seem to feel the field has been defined and that its production will not increase to any great extent over what it is now. The Luling Field in Texas registered a decrease in output during the past week while a number of good completions in two of the Gulf Coast pools served to hold up production in that section.

The Dominguez Field in California is attracting attention and recorded a gain of 4,000 barrels daily in production, the output of the entire State showing an increase of 6,000 barrels daily. In the Dominguez Field, four wells were put on production with an aggregate initial daily output of 7,002 barrels. Production of this field is expected to increase gradually. Completions in the flush areas of California are small and the number of wells being completed in these fields is declining steadily.

The test of the Transcontinental-The Texas Company well at Craig, Colo., during the past week showed the well had not been damaged by being shut in and when it was opened up it flowed steadily at the rate of 200 barrels an hour. Storage is being erected and a pipe line will be built from the field.

PRODUCTION IN THE UNITED STATES

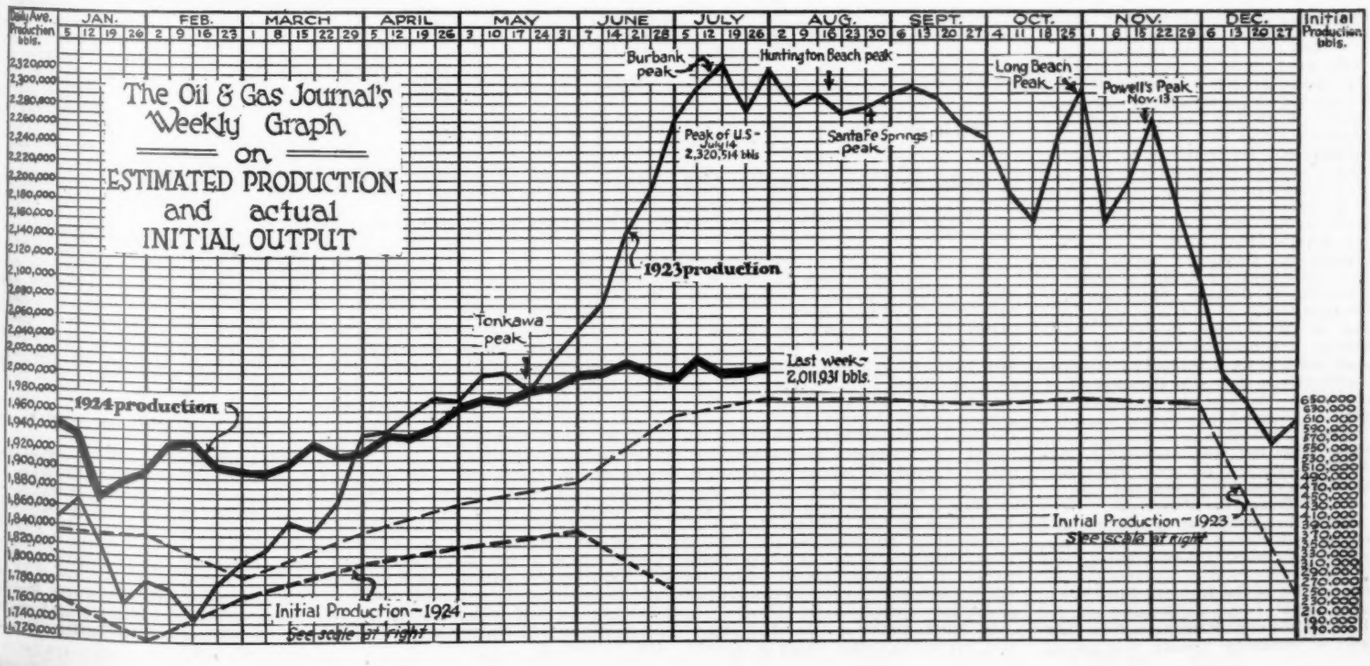
Estimated daily average production in the oil fields of the United States for the week ended July 26 and a comparison with previous week follows:

	July 26	July 19
Oklahoma—Northern Fields:		
Tonkawa	37,715	36,875
Burbank	85,100	85,300
Other Osage Fields	50,350	51,050
Cushing and Shamrock	23,850	23,875
Bristow and Eastern Bristow	50,380	50,215
Cromwell	49,665	43,850
Stroud	17,080	18,375
Northern Miscellaneous	102,990	101,975
Southern Fields	71,480	72,475
Total Oklahoma	488,610	483,990
North Louisiana	56,390	55,580
Arkansas—		
El Dorado and Calion	12,825	12,875
Smackover Light	37,715	37,015
Smackover Heavy	92,860	94,880
Stephens and Nevada	3,685	3,815
Total Arkansas	147,085	148,585
North Central Texas	123,409	123,125
East Central Texas, (Mexia, Currie, Corsicana, Powell)	127,581	124,350
Kansas	81,865	80,875
Total Mid-Continent Area	1,024,940	1,016,505
Gulf Coast	82,140	79,795
Southwest Texas	51,696	55,976
Eastern	107,425	107,975
Wyoming-Montana	123,730	130,525
California—		
Santa Fe Springs	57,000	57,000
Long Beach	155,000	154,000
Huntington Beach	44,000	44,000
Torrance	56,000	55,000
Dominguez	20,000	16,000
Remainder of State	290,000	290,000
Total California	622,000	616,000
Total United States	2,011,931	2,006,776

INCREASE, 5,155 BARRELS

"WHIP BEHIND!"

The Oil and Gas Journal's estimate of crude petroleum production for the week ending July 5 showed an increase of 22,963 barrels, while another estimate published in the daily press reported a decrease of 7,300 barrels. But for July 12—a week later—the other estimate reported the increase of 24,300 barrels and The Journal a decrease of 14,068. Then for July 19 the other, again a week later, followed with the decrease of 15,350 barrels, while The Journal's estimate showed an increase of 1,749 barrels. **See page 121.**


The Oil & Gas Journal's Weekly Graph on ESTIMATED PRODUCTION and actual INITIAL OUTPUT
Daily Ave. Production bbls.
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
Initial Production bbls.
Burbank peak
Huntington Beach peak
Long Beach Peak
Powell's Peak Nov. 13
Peak of U.S. - July 14 2,320,514 bbls
Santa Fe Springs peak
1923 production
Tonkawa peak
Last week - 2,011,931 bbls.
1924 production
Initial Production - 1923 See scale at right
Initial Production - 1924 See scale at right

10,940 Wells Completed in First Half

Falling Off of New Work and New Production as Compared With Same Period Last Year. Important New Pools

By James McIntyre

Field operations in the United States in the first six months of 1924 show a decline of 2,073 in wells completed as compared with results in the first half of last year and a falling off of 880,670 bbls. in the quantity of initial production. The number of oil wells completed were fewer by 1,432 bbls. and the average initial production per barrel was 62,36 bbls. less than shown by the completions of the first six months of 1923. There were 647 fewer dry holes and six fewer gas wells.

A total of 10,940 wells were completed. Of these 7,369 were oil wells, 1,114 were gas wells and 2,457 dry holes. The percentage of oil wells was 67 plus, gas wells 10 plus and dry holes 22 plu. The oil wells averaged 231.67 bbls. per well initial daily production.

The first half of the present year witnessed the development of a number of important fields and the decline of others which occupied the center of the stage last year.

The fields east of the Mississippi River experienced no unusual events of more than a local significance. Altogether 3,280 wells were completed in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Tennessee, Indiana and Illinois, or about 30 per cent of the total completions in the country, indicating that operators in the old fields had plenty of territory left which warranted exploitation, but the total of new production from the 2,011 oil wells completed was only 29,280 bbls., or an average of less than 15 bbls. per well. The dry holes east of the Mississippi were 625 in number and the gas wells 644. The fields in the east completed more gas wells than the fields west of the river, but over 26 per cent of all the wells drilled in that part of the eastern division were dry.

In Kansas the most important developments of the year were in Township 33-3, Cowley County, and in Russell County. A wildcatting campaign was on in several western counties of the State but the half year had passed without the industry knowing what that part of the state had in store for the future. The Cowley County development, while not large in area, was giving promise of being rich in production at the close of this review.

Nine New Pools in Oklahoma

The first half of the year in Oklahoma saw much oil history developed. The Cromwell Field, in Seminole County, and the Stroud Field in Lincoln County, and the Graham Fox Pool in Carter County, jumped into the major pool class by reason of successful drilling. Nine distinct pools were opened in various parts of the State and the most successful exploitation of Wilcox sand areas since the days of Phillipsville, in Okmulgee County, was among the features of the half year's work. A 4,000-foot sand was discovered in Tonkawa, Noble and Kay Counties, which yielded large production and in the Hominy district in Osage County, a Wilcox sand pool was developed which at times produced as much as 15,000 bbls. a day. On the other hand, a study of the accompanying table will show a falling off in completed work and in initial production as compared to the same period last year, while the average initial production per well was 328.93 bbls. as against 404.91 bbls. last year.

Texas Was Prominent

Texas was prominent in the first half of the year with a large amount of successful new work in Archer County and in the Powell Field in Navarro County, the opening of the Richland Field in the same county; the development of the Luling Field and its extension from Caldwell to Guadalupe County, and the entrance of Luling into the major pool class. The East Central Texas territory hada better half year than in the same period in 1923 with 242 completions, a gain of 128 over the first six months of last year; 131,273 bbls. initial production, or 63,548 bbls. in excess of the record for the same period in 1923. The average initial production per well showed a decrease from 1,254.17 bbls. to 944.41 bbls. There were 101 dry holes out of a total of 242 wells completed, and these were scattered through many counties in the east side of the State. The failure to find "another Powell" in the territory northeast of the famous Powell-Mexia area was a costly disappointment to several large companies which invested a vast sum in acreage and preliminary operations.

In North Louisiana, the most important find was in Cotton Valley in Webster Parish, the extent of which was not yet known when the half year ended.

The Smackover Field extensions featured the work in South Arkansas. Smackover throughout the half year was one of the busiest spots in oildom and the results were so great as to keep Smackover well up among the leading producing fields of the country. The new pool in Nevada County was of considerable local importance.

In the Rocky Mountain division the drilling of a 4,000-bbl. well in Moffat County, Colorado, was easily the most outstanding event of the half year and it is generally believed that an important field will be developed there. It is a deep sand development and will be slow, but the Prairie Pipe Line Co. will build a line into the field from Parco, Wyo., as soon as the field shows conclusive signs that warrant it.

SUMMARY OF OPERATIONS IN ALL THE FIELDS IN THE UNITED STATES IN THE FIRST HALF OF 1924

Division—	First Half	Comp.	Prod.	Dry	Gas	Oil Wells	Av. In. Prod.
Eastern	1924	1,893	5,940	285	411	1,197	4.96
	1923	2,328	9,720	367	381	1,580	6.15
Central Ohio	1924	282	876	75	178	29	30.21
	1923	239	730	76	116	47	15.53
Lima	1924	254	5,037	34	18	202	24.94
	1923	325	6,341	32	5	288	21.95
Indiana	1924	75	2,763	25	6	44	62.79
	1923	83	1,763	23	0	60	29.38
Kentucky	1924	701	12,899	176	31	494	26.11
	1923	1,083	16,433	248	44	791	20.77
Tennessee	1924	12	115	9	0	3	38.33
	1923	18	114	12	1	5	22.80
Mississippi	1924	2	0	2	0	0	.....
	1923	9	0	8	1	0	.....
Illinois	1924	61	1,650	19	0	42	39.29
	1923	156	3,788	59	2	95	39.77
Kansas	1924	525	44,780	152	42	331	135.31
	1923	927	49,648	317	41	569	87.20
Oklahoma	1924	2,619	559,856	666	251	1,702	328.93
	1923	3,469	861,791	976	362	2,131	404.41
North Central Texas	1924	1,514	119,255	538	33	943	126.46
	1923	1,615	119,200	466	34	1,115	106.01
East Central Texas	1924	242	131,273	101	2	.....	944.41
	1923	114	67,725	59	1	54	1,254.17
Southwest Texas	1924	242	165,767	32	29	181	915.84
	*1923	125	1,055	0	7	118	8.94
Gulf Coast	1924	476	121,729	173	3	300	405.76
	1923	719	164,851	256	0	463	356.06
North Louisiana	1924	206	19,964	55	70	81	246.49
	1923	222	9,790	59	54	109	89.81
Arkansas	1924	856	152,579	77	33	746	204.39
	1923	844	557,021	102	65	677	822.76
Wyoming	1924	236	57,655	12	5	219	263.31
	1923	156	40,245	13	0	143	281.43
Montana	1924	49	8,950	23	2	24	372.50
	1923	78	6,670	18	0	60	111.17
Colorado	1924	1	4,280	1	0	1	4,280.00
	1923	...	.....	..	..	..	.....
Utah	1924	1	.....	1	0	0	.....
	1923	1	.....	0	1	0	.....
New Mexico	1924	5	1,647	1	0	4	4.12
	1923	..	.....	..	..	..	.....
California	1924	688	290,078	..	..	688	421.63
	1923	387	644,368	..	..	387	1,665.05
Total all fields,	1924	10,940	1,707,093	2,457	1,114	7,369	231.67
	1923	13,013	2,587,763	3,104	1,108	8,801	294 03
Difference	1922	2,073	880,670	647	6	1,432	62.36

*Part of this division was carried last year in Gulf Coast "Miscellaneous" operations.

In California, while the number of completed wells was greatly in excess of the number in the first half of last year, or 688 as against 387, the initial production was only 290,078 bbls. as compared with 644,368 bbls., the record of the first half of last year. The average initial production was 421.63 bbls., as compared with 1,665.04 bbls. in the first half of last year. The fields which were being developed last year to a point where, in the last half of the year, they caused demoralization in the industry, were so thoroughly drilled in 1923 that little was left for the operator to develop this year. The development of the Torrance Field was about the most important event of the half year on the Pacific slope.

Looking Into the Future

Beginning with the opening of the second half year an overproduction of crude, and consequent reduction in prices which took place in July, together with a jumble of price schedules in the Mid-Continent Fields, slowed up drilling in nearly every field. The major purchasing companies discouraged wildcatting and the extension of fields of large potential production, and sought in every way to lessen the number of drilling operation not made necessary by lease obligations. If the conditions existing in the trade continue through the summer it will result in a smaller total of completed wells in the last half of the year. There was nothing on the horizon at the close of July to indicate a resumption of the big general drilling campaign started early in the year on the assumption of a possible shortage of production.

Geology's Important Part

Geology played an important part in the development of new pools in all the States where such development occurred. The science of geology is advancing steadily. Geologists are forgetting a lot of that which was gospel to them in former days, and their present policy is to take nothing for granted, but rather to work out to a finality every likely looking discovery or theory evolved by their surveys in the field.

The result of this was shown in the first half of the present year, when it could have been said that never in the history of the oil business was wildcatting carried on with such good chances of finding oil. As a matter of fact, the same condition prevails in the second half. There is hardly a doubt that did conditions warrant a continuance of much wildcatting, the second half of the year would see the discovery of new pools, the extension of pools already in the process of exploration and the joining together of pools now regarded as distinctly separate. Few operations are started now at haphazard. Competent geologists are available and the industry is taking advantage of what the "rock hounds" have learned in the past few years that was never dreamed of in their profession in the old days.

DRILLER DIES IN PERSIA

CHATHAM, Ont., July 26.—Word has been received in Petrolia of the death in Persia on July 10 of James Donald, foreman driller for the Anglo-Persian Oil Co., due to a heart stroke. Mr. Donald was born at Oil Springs, Ont., in 1885, and came to Petrolia about 10 years ago. He was a driller for a number of years and sailed last November for Persia, where he had been employed as foreman driller with the Anglo-Persian Oil Co. for seven years.

Petroleum Situation Depends on Stocks

Recovery From Depression Being Delayed by High Crude Oil and Gasoline Production. Consumption Is Increasing

By Andrew M. Rowley

The year 1923 made history in the oil business and as far as the present crude petroleum situation is concerned, it is history. The same may be said of the first half of this year. What producers and owners of crude petroleum and refined oils want to know is "What may we expect from now on?" Each knows what happened to him during the first six months of this year. What he is particularly interested in is what is going to happen to him during the next six months.

Three big factors caused the depression in oil during the first half of this year. The first and most important was the weather. Rain and cold weather combined to give the motoring season an extremely late start. Instead of warm weather starting in April in the South and Southwest, it was really too cold on the Fourth of July to go swimming and the Fourth of July was not an exceptional day. While the oldest inhabitants admit they do not remember such a "cool" spring and summer. While the weather held down consumption, increased prices for crude announced early this year when it was believed almost by all a period of unprecedented consumption necessitated the discovery of new oil fields, resulted in the production of crude petroleum showing a substantial increase and in maintaining a high level of output.

Gasoline Output Increased

Refiners throughout the country early got the fever of increasing their output to supply the demand they expected from increased automobile production and registration and new records in refining were made during the first six months of this year, the output of gasoline far exceeding anything ever registered heretofore. With the weather holding down consumption and the refiners making new high records in production of gasoline, the inevitable resulted—stocks of gasoline piled up to new high levels and the little fellows, without adequate financial backing, found themselves long on gasoline and short on cash. They had only one thing to do—sell their gasoline for what they could get for it, regardless of what it cost them to make it, and use the cash to liquidate pressing debts. Their gasoline is what is called "distress gasoline." It is that gasoline which makes "price wars" possible. It is that gasoline which governors, attorneys general and others in political life point to as proof of their assertions tank wagon and service station prices are unreasonable. "Distress gasoline" in the eyes of politicians represents a true price for the product. Little or no effort is made to determine whether that gasoline is sold at a loss or not.

With increased prices announced for crude, operators became busy early in the year to supply the crude which was expected to be needed. It is doubtful if any other period was more prolific in success of wildcat operations than the first half of this year. There were at least nine new oil pools opened in Oklahoma alone during the first six months of 1924. This development work offset declines in production of older fields and caused the output of crude throughout the country to show steady increases with the result production is and has held slightly above 2,000,000 barrels daily whereas the estimated output for the week ending January 12 was 1,871,143 barrels daily.

Consumption Is Greater

With production of crude showing an increase and refiners chalking up new records in throughput and gasoline production, only one thing could result—stocks of crude and refined oils reached new high records. THE QUANTITY OF CRUDE PETROLEUM AND REFINED OILS IN STORAGE AT THIS TIME IS THE ANSWER TO THE CRUDE OIL AND GASOLINE SITUATION. Reduce these stocks and the situation will change in the twinkinig of an eye. Maintain these stocks at their present levels and the period of convalescence of the industry is just that long prolonged.

Consumption of petroleum products is at least 20 per cent greater than it was last year. Production of crude petroleum is more than 300,000 barrels a day less than it was this time last year. These two conditions should assure prosperity. Why don't they? Simply because much of the available storage is filled, the large buyers of both crude and refined oils have more than enough for their needs and do not want to purchase more and crude oil producers and refiners refuse to give consumption a chance to reduce these stocks by their continued efforts in developing new oil fields and in running more crude through their stills than they ever did before.

The situation as regarding stored crude and refined oils was practically the same on July 1 as it was May 1 of this year. There is not a considerable difference in the quantity in storage now than at the first of the year. This despite the fact about half the motoring season, under normal weather conditions, has passed.

The stocks of crude and refined oils at this time is the one reason for the present depression in the industry. Based on present consumption and future needs, these stocks hardly can be deemed as excessive. But taken in conjunction with a production of crude equal to present needs and an output of gasoline little below maximum consumption, these stocks are not being reduced as had been expected. The psychological effect can be seen easily. There is no need for more oil right now. Hence, prices weaken and are reduced.

Little Change in Near Future

Crude oil production throughout the United States will hardly show much change in the near future. There are a number of fields like Burbank in Oklahoma, Powell in Texas, the three flush fields in California—Santa Fe Springs, Long Beach and Huntington Beach—the Stroud Field in Oklahoma and Smackover in Arkansas, which will continue to show declines, the total of which will be a substantial amount of crude. There are other areas now being developed which will enter more prominently in the production column later in the year and during next year—these being the fields in Colorado and Neew Mexico, the section in Reagan County, Texas, around the Big Lake development and certain areas of Oklahoma, Louisiana and parts of Texas such as the Richland district not far from the Powell Field there.

Declines in the older fields will be about offset by new production from recent developments. The oil industry cannot count on a big decline in production in the near future and need not fear any material increase in output of crude oil.

Answer Is "Consumption"

Consumption will continue to show increases over similar periods of last year previous years. There is no indication refiners of the country will curtail their operations. The production of gasoline will not show any great falling off during the next month or so from present indications. Consequently, while basic conditions in the entire industry all favor prosperity, this period is being and will be delayed until stocks of crude oil and gasoline are reduced. It is felt these stocks are too large. Whether they are or not from a statistical standpoint counts but little in the present situation. The feeling is prevalent they are too great. Either this feeling must be changed or stocks reduced.

With little possibility of production of crude showing any great decline and refiners continuing to run vast quantities of crude through their stills, what can be expected in the future?

The answer to this question is CONSUMPTION. Consumption is an assured fact. It is at least 20 per cent greater than it was last year and last year was a banner year so far in the history of the industry. There is but little doubt but that this consumption eventually will eat into stocks in a sufficient amount to change the situation. This condition is being delayed by the present high production and the large output of gasoline by refiners. In other words, the period of prosperity which was expected earlier this year and which is absolutely assured by reason of the great consumption of petroleum products is being held back by the stocks of crude and refined oils on hand and the maintaining of these stocks by the present production of crude oil and gasoline.

The early part of this year saw the rise of a number of good oil pools. The Luling Field in Texas jumped from an output of about 10,000 barrels a day last January to an average of from 42,000 to 52,000 barrels daily in June. The Cromwell Field in Oklahoma started the year with an average of around 300 barrels a day. It is averaging now close to 50,000 barrels. The Stroud Field in Oklahoma averaged around 2,000 barrels a day in January and is around 20,000 barrels now. Kansas came to the front with numerous wildcat developments which added to the output of that State and which promise at this time to help hold up production. The Richland Field in Texas, near Powell, jumped from an average of around 3,000 barrels a day to 14,000 barrels daily within two weeks and has indications of materially increasing this amount before very long. The Craig Field in Colorado would be a big factor if it were not so far from centers of consumption and if it had adequate pipe line facilities. The discovery well there when opened up a week ago, after having been shut in for a long time, flowed at the rate of 200 barrels an hour. The development work around Big Lake in Reagan County, Texas, has uncovered a pool which may be a big factor in the near future. The newly discovered deep sand in the Tonkawa Field in Oklahoma is a prolific source of production with wells averaging more than 2,000 barrels a day and about 45 wells drilling at this time towards this sand.

Production of Crude Petroleum in the United States for the First Six Months of 1924

	Prodn. 6 mos. bbls.	Av. D'ly Prodn. 6 mos. bbls.	No. of oil wells June 30	Av. D'ly Prodn. per well 6 mos. bbls.
New York	673,250	3,699	14,000	.25
Pennsylvania	3,738,000	20,538	72,400	.28
Ohio	3,317,000	18,225	45,008	.40
West Virginia	2,993,000	16,445	19,900	.83
Kentucky	3,738,200	20,540	16,170	1.27
Tennessee	3,300	18	27	.67
Indiana	483,000	2,654	7,242	.38
Illinois	4,017,000	22,072	20,704	1.09
Kansas	13,768,262	75,649	18,097	4.15
Oklahoma	80,024,008	439,697	57,735	7.62
N. Cen. Texas	21,568,088	118,506	12,133	9.77
E. Cen. Texas	26,324,257	144,639	2,354	61.44
Gulf Coast	15,215,601	83,602	2,549	32.80
S. W. Texas	6,230,607	34,234	878	39.00
Arkansas	24,355,910	133,824	3,182	42.08
N. Louisiana	8,541,773	46,933	3,354	13.99
Wyoming	23,227,675	127,625	2,363	54.01
Montana	1,314,848	7,224	215	33.60
Colorado	41,200	226	.....	.....
California	118,108,412	648,947	11,062	58.66
Total 6 Mo.	357,683,391	1,965,293	309,373	6.03
Same 1923	344,428,987	1,902,922	.....	.....
Increase	13,254,404	62,371	.....	.....

well to Guadalupe County, and the en-

tant find was in Cotton Valley in Webster

that warrant it.

for seven years.

Crude Reductions Again Upset Market

Little Gasoline or Fuel Oil Buying in Group 3 Following Action of Major Crude Buyers. Lower Tank Wagon Prices Expected

By C. O. Willson

A reduction of Mid-Continent crudes by the Magnolia Petroleum Co., on Saturday, followed by the Prairie Oil & Gas Co. and several other major purchasing companies, on Monday brought an end to a period of several days in which the Group 3 (Oklahoma) refined market had been comparatively firm. The crude reductions served practically to suspend trading on Monday and there was little change in the situation on Tuesday. It had been confidently expected that the lower crude prices would result in another general reduction in the Standard of Indiana gasoline tank wagon prices. The expectation was based on the known position that the Indiana company has taken that it would reduce its tank wagon and service station prices when crude prices were reduced and the further fact that this was actually done at the last crude change.

While the reduction failed to develop on Tuesday, it is believed it is assured by Wednesday, or before the end of the week. Until it materializes or it is definitely apparent that no changes are to be made at this time, the gasoline market of the Group 3 refiners will probably continue in its present unsettled state. Buyers on Monday, following the reduction, felt they should be able to purchase at ¼-cent lower price and a few were able to do so. There was so little buying that on Tuesday these prices constituted the low of the general market, although probably a majority of the refiners were still holding to the quotations in effect the latter part of the week.

If the crude reductions had not materialized it is probable that the straight run gasoline market would have continued firm. Refiners in Group 3 and the Mid-Continent area generally are moving considerably more gasoline than they are producing, as shown by the weekly statistical report of the Western Petroleum Refiners Association. Several refiners who were constantly offering distress gasoline a month to three months ago, are now in position to follow the general market. They state they still have stocks, but if they continue the movement of the past month, they will have their stocks down to a minimum by September. For that reason, they feel secure and are no longer responsible for a slumping market.

Exports as a Factor

The crude reductions were not expected to materialize by many until next month and due to this fact it was generally believed that buying from jobbers would improve the first of this week and further aid the market. There was little activity in the market for gasoline so far as the Mid-Continent was concerned. The Sinclair Refining Co. bought 500,000 gallons of aviation gasoline from North Texas refiners last week. This lack of buying on the part of operators is surprising to the trade. One report is to the effect that the buyers have been able to supply their wants in other sections. It is no secret that several of the large companies have huge gasoline stocks which their domestic movement will not reduce to the desired point by fall and it would not be surprising if they have offered material to exporters accustomed to purchase their supplies from Mid-Continent refiners. Herein is reflected the real importance of the Bureau of Mines' reports which showed that on June 1 there were nearly 1,650,000,000 gallons of gasoline in stocks. It may mean in the face of price weakness in the crude market that there will be few opportunities for the smaller concerns to participate in the export business over the balance of the year.

REFINED MARKET BAROMETER

Refined markets throughout the United States continued to reflect the generally unsettled situation in the oil industry for which recent reductions in crude prices are responsible. This situation does not apply to the West Coast where markets are generally steady and where in fact there has been strength displayed in some products. Further reductions in Mid-Continent crudes again upset the Middle West markets and a general revision downward in gasoline prices at the refinery and tank wagon schedules is expected. However up to Wednesday refinery prices were fairly firm in those areas. In the East the gasoline market is being aided by heavy movement which is thought may continue to hold prices fairly firm over the balance of the summer. Kerosene is weak in the East and the export situation is unsatisfactory. Prices in other sections are firm. Crude reductions have weakened the price position of fuel and gas oils and quotations are lower where there are any changes. Natural gasolines are strong along the West Coast and firm in other sections. Lubricating oils continue slow.

Mid-Continent—Crude reductions on Saturday and the first of this week again upset gasoline market. Little change in gasoline prices to date although there is less buying due to expected declines. Kerosene stronger in North Texas due to heavy domestic buying and firm in other sections. Fuel oils weaker in all areas. Gas oils firm with reported purchase of a million gallons for export from North Texas plants. Natural gasolines firm. Lubricating oils weak.

Atlantic Seaboard—Desire of refiners to reduce gasoline inventories despite heavy movement has weakened position of product. Slightly lower gasoline prices expected after which it is believed market will be fairly firm over balance of year. Kerosene both for domestic and export shipment weak. Fuel oil unsettled with lower prices expected. Lubricating oil prices lower. Wax, Diesel and furnace oils firm.

California—All gasolines stronger. Heavy buying by Shell Company and General Petroleum Corporation distinct aid to natural gasoline market. New Navy prices also slightly higher. Heavy movement of engine distillates to Atlantic Seaboard with few local sales. Kerosene prices firm. No change in heavy distillates and fuel oil. Good movement of lubricating oils.

Pennsylvania—Better tone in market. Improved demand for gasolines and kerosenes has held prices firm. Wax strong with little available for spot shipment. Other products fairly firm.

Gulf Coast—Recent crude reductions caused refiners to lower quotations from ½ to 2½ cents on neutrals. No change in demand which is slow.

This was largely the situation last year when similar conditions existed.

The usual direct effect of the latest crude cut was a reduction in fuel contracts based on the price of crude. The grades on which these contracts were based were reduced 25 cents. Based on the 60 per cent basis, it means that refiners are securing 15 cents less a barrel for their fuel output.

Gasolines and Naphtha

Although straight gasoline prices held fairly firm, several days last week there was very little new spot business. Many refiners including several of the larger concerns were sold up for July and were only interested in August business. They were inclined to be firm at 8 cents for August delivery and some were asking up to 8½ cents. Buyers were slow in August purchases, sensing the crude reduction which actually materialized. As a result a new month will again open with comparatively little business placed for delivery over the next 15 to 30 days.

Some buyers in the Middle West, through marketers, put out some queries for delivery over the 90 days with the obvious intent of finding out what the refiners and the trade generally thought of the market trend in gasoline over the early fall months. One flat proposition of 7 cents is reported to have been made for U. S. Motor for delivery over August, September and October. This was probably a tentative offer sent out by a marketer who hoped to place the business should he be able to interest a refiner in the sale. So far as known no refiner in the group would be interested in an offer of that kind. There is no unanimity of opinion as to the gasoline market trend even over the next month. There are many who profess to see "$1 crude and 6-cent gasoline" before the winter months, a duplication of last year. There is said to be a feeling among many of the jobbers of the Middle West that this will develop and if such is the case, strong resistance is to be expected from that source in any attempt to hold prices firm or advance them over the next few months.

Scoff at Predictions

The refiners are inclined to scoff at the 6-cent gasoline price development, although many would welcome the $1 crude. Between these two views are many observers who are not willing to make any definite prediction as to the low crude and gasoline prices but who feel that gasoline prices at the refinery have practically discounted any future crude reductions, at least until early winter, with the further prediction that the crude situation will have started to right itself before that time, minimizing he probability that gasoline prices will be further reduced even then. These market observers, as has been previously explained in these columns, cannot see that the fundamental crude situation is the same this year as last and they look for a general tightening of markets earlier than it developed last year. This argument is not in line with those who predict a large reduction in crude and refined stock inventories before an upturn in the market. The latter believe that both large and small concerns desire to reduce the large inventories accumulated to a large extent in 1923, before they become active in the market for new supplies. It is needless to state that this is contrary to developments in the past when the crude market has uniformly started up just as soon as there was a relationship between supply and demand resulting in the lowering of crude stocks. This in the past has not always meant an advance in gasoline prices at the refineries, but it does usually serve to check further declines.

The movement of the higher gravity gasolines has been confined to domestic movement. As in the case of the U. S. Motor grade, the new business has been primarily for delivery over August. Some orders for 60-62, 400 at 9 cents were placed previous to the latest crude reductions; 10 cents was the prevailing price for aviation previous to the crude reduction, but so far as known there was little trading either for immediate or future delivery. The 50-52 naphtha grade was available at 7½ cents before the crude reductions. The product is offered freely with sales confined to small purchases.

Kerosene and Distillate

There was no change in the kerosene price situation. Buyers are still endeavoring to shale ½- to ¼-cent of the prices which have been in effect for several weeks but are seldom successful. Occasionally a refiner will accumulate considerable stock which he sacrifices for immediate shipment, but these cases have been rare. Some of the trade believe that the lower crude prices will bring slightly lower prices regardless of any letup in the domestic demand.

Exporters are keeping in touch with the market. This business at present is being supplied from refining areas outside of the Mid-Continent, except the North Louisiana group and it is probable that this situation will prevail so long as the domestic market continues firm. The tank wagon reductions which have been made in Ohio, Standard of New York and New Jersey territories and other scattered points recently are pointed out as further indication of weakness.

Inquiries for distillate for future delivery have not been so numerous during the past week. Some jobbers have covered their requirements while others are out of the spot market in expectation of lower prices as a development of the lower crude prices. One of the major refiners of the Group is reported to be offering a somewhat unique proposition for delivery until next April. The offer as reported starts with a flat price of 3¼ cents over August and September and increases slightly in October and November with a flat price of 4 cents over the three winter months. The price then declines so the final month of April is the same as August. The proposition would probably prove to be slightly better to the jobber than some of the flat offers which do not change over the nine months.

Fuel and Gas Oils

Sellers had difficulty in maintaining their prices on fuel oils all of last week, although in a majority of cases, no price concessions were given. Buyers reported that it was more freely offered, although, as usual, there were no large amounts available on the spot market. Buyers were endeavoring to secure the lower gravities at 70 cents and 24-26 under 75 cents. The crude reductions may further lower the prices but the resistance shown to this bearish pressure is encouraging to the refiners.

Gas oil prices are unchanged, although more is available at 2⅝ cents. There are several buyers, both large and small, but they are also staying out of the market as much as possible, due to the declining crude market.

Natural Gasolines and Blends

There was considerable buying of natural gasolines for delivery over August and as a result, prices on all grades are firm. The Humble Oil & Refining Co. bought in excess of 200 cars from Oklahoma concerns for delivery out of both North Texas and Oklahoma plants. This purchase was for Grade A at a reported price of 7¼ cents. There were at least two other substantial purchases by large buyers for August delivery. The August prices in all cases were in line with the

(Continued on Page 155)

of an eye. Maintain these stocks at their present

The answer to this question is CONSUMPTION.

Increase ..... 13,254,404 62,371 ....

California Petroleum Market Analyzed

First Six Months of This Year Disappointing to Marketing Companies. May Withdraw Oil From Storage This Fall

By Carl J. von Bibra

The first six months of this year have been a sad disappointment to the California oil marketing companies. In the late fall and winter of 1923 it was generally believed that prices of crude and of refined products had touched bottom. Crude production was still far ahead of consumption but then shipments to the Atlantic and Gulf Coasts and to foreign ports were holding up very satisfactorily. Everybody took it for granted that these shipments would sag off more rapidly than the production of crude during the spring months and that therefore no very rapid price increases could be expected. However, the oil consumption of the normal Pacific Coast market was gradually increasing. By the normal Pacific Coast market is meant the States of California, Oregon, Washington, Arizona and Nevada; British Columbia, Alaska, the west coast of Latin America and a generous proportion of the Japan and China trade. There were good indications that by summer this market would be consuming 450,000 barrels per day. By that time production would have declined from 850,000 barrels daily to somewhere in the neighborhood of 550,000 barrels and the balance of 100,000 barrels would easily be absorbed by the Eastern States and Europe, both of which territories it was felt would be short of both gasoline and fuel oil and therefore willing to pay fairly high prices.

By all the foregoing reasoning it was the consensus of the best marketing opinion of the Pacific Coast that the early months of 1924 would see a slight but not very rapid increase in prices. Momentum would be gathered as we approached the summer season of high consumption and therefore about May or June prices would mount higher and higher until a level was reached at which the big companies which had been storing oil all through the three-year period of overproduction would feel justified in drawing on their stocks for eastern shipment. The extent to which this view was held now seems amost ridiculous in the light of what actually happened. As a matter of fact, no forecast could have gone very much more wrong than this one did.

What Actually Happened

What actually happened was that the early spring of 1924 saw an extremely rapid rise in prices, both of California crude and of refined products. Marketers became wildly enthusiastic over the outlook. Oil securities representing West Coast companies sky-rocketed in keeping with those of the rest of the country. Sales were holding up well and the production of the three big gusher pools of southern California was sluffing off at just about the same terrific rate at which it had risen. Oil was still being put into storage to the tune of more than 1,000,000 barrels per month, but what of it! Every increase in prices gave swollen inventories a higher book value and the stuff was being sold in good quantities. Therefore the day was coming closer and closer when paper profits could be converted into cash.

When the month of March rolled around, however, prices stopped going up. They held fairly firm for a few weeks and then gradually began to break. At first no special significance was attached to the softening of the market. The condition was classed as "temporary." The coming of the summer season would soon start the climb upward again. It was only reasonable that an uninterrupted upward movement could not last indefinitely. There have to be occasional periods of hesitation, and so forth and so on.

We are now in the month of July and the California market is still soft. Crude hasn't gone down but a cut would not be unexpected at any time. Certainly the trade papers of the Pacific Coast are not now carrying headlines in red ink as they did several months ago announcing "Higher Crude Prices Confidently Expected This Week." Gasoline and other refined products are selling practically at the cost of manufacture based on present crude prices. Some cuts like furnace distillate and gas oil are selling at practically the same price as fuel oil.

What's the answer to this turn of events so unexpected six months ago?

California's Increasing Stocks

Last fall and winter there were published a number of excellent statistical studies which forecast the probable production, shipment and storage of oil in California during the year 1924. For this time of the year (July) all these studies had the State's crude production from 10 to 15 per cent lower than it now actually is. In other words, the decline has not been as rapid as anticipated. New fields like Torrance and Dominguez, and the excellent showing made by old properties which have been opened up after being shut in for a long period, have all tended to retard the decline of California crude production. Likewise the shipment of California oil through the Panama Canal has not held up as well as it might have, although it has been far from disappointing. The combination of these two factors has made it necessary to continue the storing of more and more oil. The State of California has now in storage more than 115,000,000 barrels of crude and refined products. The accompanying chart shows very clearly the continued spread between shipments (including oil locally consumed) and stocks on hand. This chart was published by the General Petroleum Corporation in a bulletin issued during June by Captain John Barneson, the company's president. The figures represented here graphically do not coincide exactly with those issued by the various Governmental and trade agencies which supply the petroleum industry with statistical information. The official figures have been corrected to make allowance for a number of known discrepancies and consequently the chart here given is believed to represent the true situation up to the beginning of June. The figures for the month of June are not yet available but judging from present indications shipments have again fallen off while stocks have increased once more.

New Marketing Organizations

The California oil companies which have been established in the marketing end of the business for some years have had another source of trouble in the past half year. Not only has the oil commodity market acted in a fashion which no one could have predicted when the year started but competition has become still more complex.

The Pacific Coast market has always been one which varies very widely in competitive conditions. For years the bulk of the refining has been centered around San Francisco Bay and Los Angeles. From these two points radiated the distributing organizations of the various marketing companies. As a general rule the larger the company the greater the radius of its activities. The natural result of this is that the two refining centers have been the hotbeds of competition. Years ago there were a large number of small refineries around San Francisco Bay but in the past 10 years practically all of these have been crowded out of business. Therefore, the San Francisco market is now divided by most of the big concerns, such as the Standard, Shell, Union Oil, Associated and one or two others. In the Los Angeles district it is different. This part of the State of California seems to be the breeding ground of small companies. Consequently this is the territory in which price cutting, rebating in all its forms, and other unstable marketing methods are rampant.

The rest of the Pacific Coast is supplied with petroleum products from Los Angeles and San Francisco harbors and practically all the selling is done directly by the big California marketing companies. There being no local supplies of crude in either Washington or Oregon and only unimportant and minor deposits in British Columbia and Alaska, there has never been a chance for small local refining and distributing companies to grow up. However, the choice territories centering around Seattle and Portland have been sought by most of the established California companies. One after another of them has broken into the jobbing and retailing field in the Pacific Northwest. During the early part of this year the General Petroleum Corporation started to sell its gasoline and lubricants through independently owned service stations throughout the Pacific Northwest. The vigor with which the new competitor invaded this marketing territory created quite a bit of trouble for the marketers already established here. This was in addition to the poor business naturally resulting from an unusually prolonged winter and late summer.

Growing Competition

In the Los Angeles district matters were further complicated by the active entrance of the Pan American Petroleum Company, California subsidiary of the Pan American Petroleum and Transport Company, into the retail marketing field. This company is reported to have spent huge sums for service station sites and consequently finds itself in possession of some of the best locations in southern California.

The Shell Company of California has greatly increased its gasoline sales in and around Los Angeles to the detriment of its many competitors. This company is still more or less of a newcomer in this field having broken into the retail marketing business in southern California by absorbing and expanding the distributing organization of the old Puente Oil Company which was owned by the Union Oil Company of Delaware and went to Shell of California as a result of the organization of the Shell Union Oil Company. Although the Shell Company of California has been marketing in the southern part of California for only about two years it is now one of the most formidable distributors in the territory.

Spectacular in this as in all his other activities, C C. Julian has built up a big service station system in Los Angeles and its suburbs as well as in Long Beach and other nearby cities. The Julian Petroleum Corporation is selling both through its own stations and through choice independent stations. Its own stations are, by the way, of an original and very pleasing design, painted in apple green, red and white and kept in immaculate condition. The Julian trucks are a snowy white, evidently designed to cater to the well-known popular impression that all white things are pure.

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THE SITUATION IN CALIFORNIA

The California market is an integral part of the oil market of the entire United States. In the immediate future at least its ruling prices will be those of the Atlantic and Gulf shipping centers less the cost of transportation through the canal.

The normal Pacific Coast market is consuming about 450,000 barrels of oil a day.

Probably by January 1, production in California will have fallen to approximately 500,000 barrels daily. Consumption then will probably care for from 465,000 to 470,000 barrels daily.

Fuel oil is by far the strongest petroleum product on the Pacific Coast.

business over the balance of the year. of the Middle West that this will develop Motor grade, the new business has been

(Continued on Page 155)

Producing Cost and Market Value of Oil

Report Prepared for Sub-committee, of Which E. W. Marland Was Chairman, Appointed by Nicholas Conference at Chicago Last Year

By C. C. Osborn
Economist Marland Oil Co

This statement is a comparison of the cost of finding and producing crude petroleum and the market value of the oil produced in the United States from January 1, 1921, to June 30, 1923. The work was undertaken last summer under Mr. Marland's direction. Questionnaires were sent to a large number of companies operating in all parts of the country where oil is produced. About 200 returns were received, many of them from large compaies controlling substantial proportions of the Nation's output. It was hoped at the time that enough data would be obtained from the producers to form the basis for a complete report on the subject, but, unfortunately, there was not enough returns to warrant detailed conclusions that could be considered final for the industry. It was possible, however, to draw some provisional general conclusions that are believed to be of value. The returns were considered as typical samples, and were supplemented by both Government and unofficial, reliable statistics and, where more specific data was lacking, by estimates based upon our own judgment and experience. This report is a short statement summarizing the said conclusions.

COST AND PRICES COMPARED

One of the episodes of the depression in the oil business caused by the overproduction in 1923 was the conference which met in Chicago on July 26 last year in response to a call by L. P. Nicholas, president of the National Petroleum Marketers' Association, which ended in the appointment of a committee to investigate "the costs of finding, producing, refining and marketing petroleum and its products" and to report "whether the prices for tank wagon gasoline and crude oil are unfair to the public and to the industry."

A crude cost investigating sub-committee was named later to formulate a report, with E. W. Marland as chairman. The comparative statement showing the cost of finding and producing crude petroleum and the market value of the oil produced has been prepared by C. C. Osborn, economist of the Marland Oil Co., under Mr. Marland's direction.

The first part of the report relates to the cost of producing oil from small wells. The second part is a comparison of the money expended by the producing branch of the industry and the proceeds received from the sale of oil. In the first part the final overage price per barrel arrived at is a straight arithmetic average based upon the returns received. In the second part the 200 returns considered as representative examples of drilling costs in the various fields, and, by applying them to well-completion statistics available from authentic sources, we arrived at tentative drilling expense. The factors upon which no exact and complete United States contains about 300,000 producing oil wells, of which 250,000 yielded an average of one barrel a day. These wells, as a whole, decline at a rate of only a few per cent each year. They are our most settled source of supply. The operating cost given was calculated on

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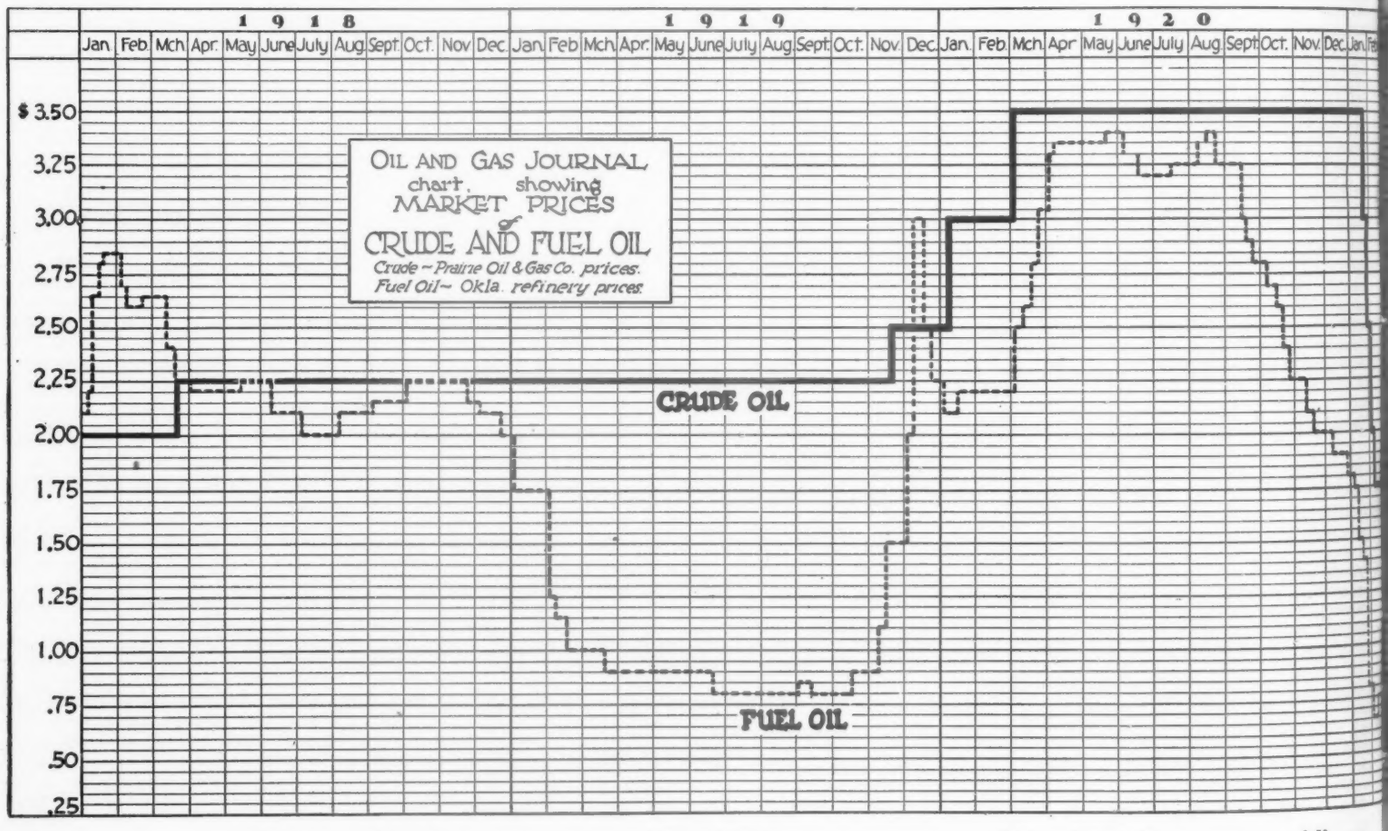


Date	Price Crude	Price Fuel Oil
1918—		
January 1	$2.00	$2.10
January 5	....	2.20
January 10	....	2.65
January 15	....	2.80
January 20	....	2.81
February 4	....	2.70
February 10	....	2.60
February 25	....	2.65
March 12	....	2.40
March 17	....	2.25
March 19	2.25	....
April 2	....	2.20
May 14	....	2.25
June 8	....	2.10
July 4	....	2.00
August 5	....	2.10
September 4	....	2.15
October 3	....	2.25
November 25	....	2.15
December 5	....	2.10
December 20	....	2.00
1919—		
January 2	....	1.75
February 3	....	1.25
February 9	....	1.15
February 20	....	1.00
March 21	....	.90
June 21	....	.80
September 2	....	.85
September 12	....	.80
October 17	....	.90
November 8	....	1.10
November 15	....	1.50
November 20	2.50	....
December 2	....	2.00
December 8	....	2.00
December 16	....	2.50
December 21	....	2.25
1920—		
January 2	....	2.10
January 6	3.00	....
January 16	....	2.20
March 1	3.50	....
March 3	....	2.50
March 12	....	2.60
March 13	....	2.80
March 26	....	3.05
April 3	....	3.30
April 6	....	3.35
May 25	....	3.40
June 7	....	3.30
June 20	....	3.20
July 14	....	3.25
August 6	....	3.35
August 14	....	3.40
August 27	....	3.25
September 13	....	3.00
September 16	....	2.90
September 27	....	2.80
October 8	....	2.70
October 15	....	2.60
October 18	....	2.40
October 28	....	2.25
November 12	....	2.10
November 18	....	2.00
December 10	....	1.90
December 29	....	1.80
1921—		
January 6	....	1.75
January 12	....	1.50
January 20	....	1.40
January 24	3.00	....
January 28	....	.80
January 31	2.50	....
February 4	2.00	.65
February 9	1.75	....
February 19	....	.65
March 4	....	.70
March 14	....	.75
March 21	....	.70
April 3	....	.75
April 16	....	.70
April 20	....	....
May 2	1.50	....
May 3	....	.60
May 21	....	.65
May 28	....	.60
June 13	1.25	....
June 16	1.00	.60
July 20	....	.55
July 26	....	.60
August 6	....	.65
September 10	....	.67½
September 21	....	.60
October 1	1.25	....
October 6	....	.55
October 7	1.50	....
October 10	....	.60

several months ago announcing "Higher Crude which varies very widely in competitive conditions.

(Continued on Page 38)

Cracking Policy Upheld by The Texas Co.

Strong Defense in the Government's Suit Outlined in Statement on Behalf of the Company's Course on Patent Agreement

By L. M. Fanning

Indicating that the oil companies, and particularly The Texas Co., will make a strong defense in the Government's patent suit, The Texaco Star, official organ of The Texas Co., following up a brief statement made to the press by Judge Amos A. Beaty, the company president, which was published by The Oil and Gas Journal, states editorially that there has been no secrecy or concealment of the facts aind that the LaFollette committee and the Department of Justice had been apprised of all developments, including licensing agreements, in connection with cracking patents. It points out that licensees have not complained that royalties are excessive, and neither does the Government. Regarding patents generally, it brings out the fact that every patent is a monopoly; the patent granted by the Government is a 17-year monopoly in terms, with the rights to exclude implying the right to license with restrictions or upon any terms which the owner of the patent may elect to impose. The statement outlines the status of The Texas Co. in connection with the suit and says that even if the case were successful from the Government's standpoint it would not be very serious for the company. The statement in full follows:

No Penalties Sought

The Attorney General of the United States has filed suit in the Federal Court at Chicago against a number of oil companies, including The Texas Co. The purpose of the action, as stated in the bill of complaint, is an injunction on final hearing. No temporary injunction is sought and no penalties, fines or forfeitures are involved. The things sought to be enjoined on final hearing are certain alleged practices in the granting of licenses to operate under patents heretofore issued by the United States Government on cracking processes and particularly the insertion and observance of clauses restricting and limiting licensees in their operations, territorily and quantitatively, or clauses granting an option on the product to the Standard Oil Co. of Indiana. It is alleged that these violate the anti-trust laws.

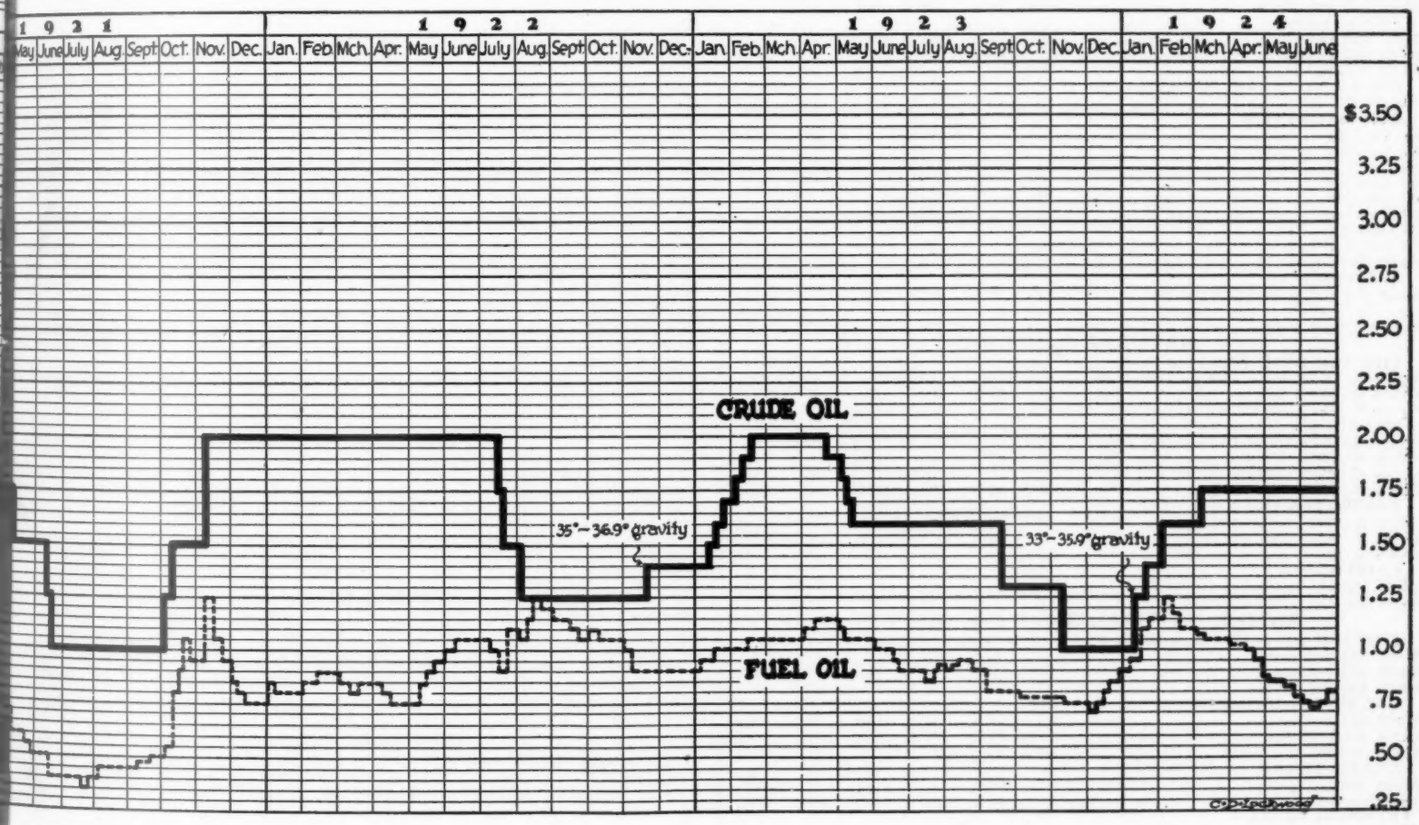
When the suit was filed Mr. Beaty, in response to a request from the press, gave out the following statement:

"It is a law suit and will doubtless be tried on its merits. It involves not only anti-trust law, but also the scope and effect of patent laws which have stood unshaken for years. The questions are of technical and strictly legal nature. We have acted throughout upon legal advice and feel sure of our ground. A discussion of the points would be of no use at this time. They can better be developed on the trial in court."

Political Phases Minimized

He thus brushed aside all inferences that might be drawn from the fact that the suit was filed in the year of a presidential election, at a time when the Democratic National Convention was in session in New York, when LaFollette was in the act of launching his campaign for radical votes from the Republican organization, charging that party with the toleration of gasoline trusts, patent clubs and other devilment. Following the lead of the president of the company, we shall deal with the subject as one of interest to employes and stockholders, imputing no sinister or ulterior purpose to the Department of Justice. The question on trial will be, not the motive with which the suit was brought, but has the Government a case and what is the defense? As indicated in Mr. Beaty's interview, the points will be rather legal and technical. This is true because the courts must construe and reconcile two sets of statutes, one of them our patent laws and the other our anti-trust acts. The minutiae of this would be too much for the layman and any effort to elucidate the points here would be energy expended at the wrong

(Continued on Page 150)



October 15	.90	July 8	1.00	April 8	1.10	December 29	.90
October 19	1.05	July 15	1.75 .90	April 14	1.15	1924—	
October 24	.95	July 18	1.50	April 23	1.80	January 8	.95
November 7	2.00	July 22	1.10	May 2	1.80	January 15	1.25 ....
November 8	1.25	August 2	1.25 1.05	May 5	1.70 1.05	January 19	1.10
November 16	1.05	August 7	1.15	May 12	1.60	January 22	2.40 ....
November 20	.95	August 14	1.25	June 2	1.00	February 2	1.15
December 1	.85	August 25	1.20	June 19	.95	February 5	1.60 ....
December 5	.80	September 1	1.15	June 24	.90	February 12	1.25
December 12	.75	September 15	1.10	July 15	.85	February 19	1.17½
1922—		September 24	1.05	July 21	.90	March 4	1.10
January 1	.85	October 1	1.10	July 26	.92½	March 8	1.07½
January 5	.80	October 10	1.05	August 1	.90	March 11	1.75 ....
February 1	.85	November 1	1.00	August 6	.92½	April 1	1.05
February 14	.90	November 8	.90	August 12	.95	April 15	1.02½
March 2	.85	November 22 (35°-36.9)	1.40	August 27	.90	April 22	1.00
March 10	.80	1923—		September 9	.80	April 29	.95
March 16	.85	January 5	.95	September 19	1.30	May 6	.87½
April 9	.80	January 13	1.50	October 5	.77½	May 20	.85
April 15	.75	January 17	1.60 1.00	November 8	1.00	May 27	.82½
May 9	.85	January 27	1.70	November 10	.75	June 3	.77½
May 15	.90	February 2	1.80	December 1	.70	June 10	.75
May 20	.95	February 10	1.90	December 7	.75	June 17	.72½
June 1	1.00	February 15	1.05	December 14	.80	June 24	.75
June 9	1.05	February 17	2.00	December 21	.85		.80

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
50-52 450 end point (Naphtha)	.07½	.07¾	.07¾	.08	.08¼	.08½
56-58 450 end point	.07¾	.08	.07¾	.08	.08¼	.08½
58-60 437 end point (U. S. Motor)	.08	.08¼	.08	.08¼	.08¾	.09
60-62 400 end point	.09¼	.09½	.09¼	.09½	.10	.10¼
64-66 375 end point	.10	.10¼	.10½	.10½	.10¾	.11
68-70 360 end point	.10⅜	.11	.10¾	.11¼	.11½	.11¾
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.07¼	.07½	.07½	.07¾	.08	.08¼
56-58 450 end point	.07½	.07¾	.07¾	.08	.08	.08¼
58-60 437 end point (U. S. Motor)	.07¾	.08	.08	.08¼	.08½	.08¾
60-62 400 end point	.08¾	.09	.09	.09½	.09¾	.10
64-66 375 end point	.09¼	.09½	.09¾	.10	.10	.10½
68-70 350-365 end point	.10½	.10¾	.10¾	.11	.11	.11½
KANSAS—						
58-60 437 end point (U. S. Motor)	.08	.08¼	.08¼	.08¾	.09	.09¼
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.07	.07¼	.07½	.07¾	.08	.08¼
50-52 440 end point (Naphtha)	.07¼	.07½	.07½	.07¾	.08	.08¼
56-58 450 end point	.07¼	.07½	.07½	.07¾	.08	.08¼
58-60 437 end point (U. S. Motor)	.07¾	.08	.08	.08¼	.08¼	.08½
60-62 400 end point	.08¾	.09	.09	.09¼	.09½	.09¾
64-66 390 end point	.09	.09¼	.09½	.09¾	.10	.10¼
64-66 375 end point	.07¼	.09½	.09¾	.10	.10	.10½
68-70 360 end point	.10¼	.10½	.10½	.10¾	.10¾	.11
NORTH LOUISIANA—						
56-58 450 end point	.07¾	.08	.08	.08¼	.08¼	.08½
58-60 437 end point (U. S. Motor)	.08	.08¼	.08¼	.08½	.08½	.08¾
60-62 400 end point	.09¼	.09½	.09½	.10	.10	.10¼
64-66 390 end point	.09¾	.10	.10	.10¼	.10¼	.10½
64-66 375 end point	.10¼	.10½	.10½	.10¾	.10¾	.11
ARKANSAS—						
58-60 450 end point	.08	.08¼	.08¼	.08½	.08½	.08¾
58-60 437 end point (U. S. Motor)	.08¼	.08½	.08½	.08¾	.08¾	.09
64-66 375 end point	.09¾	.10	.10	.10¼	.10¼	.10½
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.10¼	.10½	.10¾	.11¼	.11½	.12
PENNSYLVANIA—						
52 Naphtha	.11½		.11½		.11½	
54 Naphtha	.11⅞		.11⅞		.12	
56 Gasoline	.12		.12		.12	
58 Gasoline	.12¼		.12¼		.12¼	
60 Gasoline	.12¾		.12¾		.12¾	
62 Gasoline	.13½		.13½		.13½	
64 Gasoline	.14¼		.14¼		.14¼	
66 Gasoline	.15		.15		.15	
68-70 Gasoline	.16¼		.16¼		.16¼	
CALIFORNIA—						
54-60 437 end point (U. S. Motor)	.11	.12	.10½	.11½	.10½	.11½

*Colorado ponts.

NATURAL GASOLINE

CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
Grade A, 72-78, under 375 e.p., rec. 90%	.07½	.07¾	.07¾	.08	.08	.08¼
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07¼	.07½	.07½	.07¾
Grade C, 80-88, 350 end point, rec. 78%	.06¾	.07	.06¾	.07	.07¼	.07½
OKLAHOMA (Group 3)—						
Grade A, 72-78, under 375 e.p., rec. 90%	.07¼	.07½	.07¼	.07½	.07¾	.08
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07	.07¼	.07¼	.07½
Grade C, 80-88, 350 end point, rec. 78%	.06¾	.07	.06¾	.07	.07	.07¼
Grade D, 88-92, 350 end point	.06½	.07	.06½	.07	.07	.07¼
NORTH TEXAS—						
Grade A, 72-78, under 375 e.p., rec. 90%	.07¼	.07½	.07¼	.07½	.07½	.07¾
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07	.07½	.07¼	.07½
Grade C, 80-88, 350 end point, rec. 78%	.06¾	.07	.06¾	.07	.07	.07¼
CALIFORNIA—						
68-80 380-410 end point absorption	.10½	.11	.10	.11	.09½	.10½
78-84 350 end point compression	.10		.10		.10	

MOTOR NATURAL GASOLINE (BLEND)

CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
58-62 437 end point	.07½	.07¾	.07¾	.08	.08¼	.08½
60-62 450 end point	.07½	.07¾	.07¾	.08	.08¼	.08½
64-66 450 end point	.07½	.07¾	.07¾	.08	.08¼	.08½
OKLAHOMA (Group 3)—						
60-62 450 end point	.07¼	.07¾	.07½	.07¾	.08	.08¼
64-66 437 end point	.07¼	.07¾	.07½	.07¾	.08	.08¼
68-70 430-435 end point	.07¼	.07¾	.07½	.07¾	.08	.08¼
NORTH TEXAS—						
58-62 440 end point	.07¼	.07½	.07½	.07¾	.08	.08¼
58-60 450 end point	.07¼	.07½	.07½	.07¾	.08	.08¼
PENNSYLVANIA—						
*60-62	.11½		.11½		.12	
*64-66	.11½		.11½		.12	
*66-68	.11½		.11½		.12	
*68-70	.11½		.11½		.12	

*At Sistersville, W. Va.

BURNING OIL

CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
42-43 water white Kerosene	.04	.04½	.04	.04¼	.04	.04¼
42-44 water white Kerosene	.04½	.04½	.04¼	.04½	.04¼	.04½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
42-44 water white Kerosene	.04½	.04¾	.04½	.04¾	.04½	.04¾
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04¼	.04	.04¼	.04	.04¼
42-44 water white Kerosene	.04¼	.04⅜	.04¼	.04⅜	.04⅜	.04½
41-43 prime white Kerosene	.03⅞	.04	.03⅞	.04	.03⅞	.04
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07¼		.07¼		.07¼	
NORTH TEXAS—						
41-43 water white Kerosene	.04	.04⅛	.03⅞	.04	.03⅞	.04⅛
41-43 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03⅞
40-42 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03⅞
42-44 prime white Kerosene	.04⅛	.04¼	.04⅛	.04⅜	.04¼	.04⅜
ARKANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04½	.04¾	.04½	.04¾
42-44 water white Kerosene	.04½	.04¾	.04¾	.05	.04¾	.05
PENNSYLVANIA—						
43 Kerosene prime white	.03⅞		.05⅞		.05⅞	
45 Kerosene water white	.06⅛		.06⅛		.06¼	
46 Kerosene water white	.06½		.06½		.06½	
47 Kerosene water white	.07		.07		.07	
36 Miners' Neutral	.06¼		.06¼		.06¼	
34 Neutral	.06½		.06½		.06½	
34 Sundebloomed Neutral	.07½		.07½		.07½	
300 Mineral Seal	.07		.07		.06½	
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08½	.09	.08½	.09	.08¼	.08¾
Engine distillate, 42-44 480 end point	.07½	.07¾	.07½	.07¾	.07½	.07¾

*Colorado ponts.

FUEL OILS

CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
24-26 Fuel Oil (sellers' cars, Group 3)	.75	.80	.75	.80	.80	.85
22-24 (El Dorado)	.80	.85	.80	.85	.85	.90
18-20 (Smackover)	.80	.85	.80	.85	.85	.90
32-36 Gas Oil	.02⅝	.02¾	.02¾	.02⅞	.02¾	.03
38-40 Straw distillate	.03¼	.03⅜	.03⅛	.03⅜	.03¼	.03½
KANSAS—						
24-26 Fuel Oil	.90	.95	.95	1.00	.95	1.00
32-36 Gas Oil	.02⅞	.03⅛	.02⅞	.03⅛	.02⅞	.03⅛
38-40 Distillate	.03⅛	.03½	.03¼	.03½	.03¼	.03½
OKLAHOMA (Group 3)—						
22-26 Fuel Oil (sellers' cars)	.72½	.77½	.75	.80	.75	.80
24-26 Fuel Oil (buyers' cars)	.72½	.77½	.75	.80	.77½	.82½
24-26 Fuel Oil (sellers' cars)	.75	.80	.77½	.82½	.77½	.82½
28-30 Fuel Oil (sellers' cars)	.87½	.92½	.87½	.92½	.87½	.92½
32-36 Gas Oil	.02⅝	.02⅞	.02⅝	.02⅞	.02⅝	.02⅞
38-40 Straw distillate	.03⅛	.03⅜	.03⅛	.03⅜	.03⅛	.03⅜
NORTH TEXAS—						
24-26 Fuel Oil	.72½	.77½	.80	.85	.80	.85
26-30 Fuel Oil	.80	.85	.85	.90	.85	.90
32-36 Gas Oil	.02⅝	.02⅞	.02⅝	.02⅞	.02⅝	.02⅞
36-38 Gas Oil	.02⅞	.03	.02⅞	.03	.02⅞	.03
38-40 Straw distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03⅜
NORTH LOUISIANA—						
20-22 Fuel Oil	.85	.90	.85	.90	.85	.90
32-36 Gas Oil	.02⅞	.03	.02⅛	.03	.02⅞	.03
36-40 light Straw distillate	.03	.03¼	.03	.03¼	.03	.03½
ARKANSAS—						
38-40 Distillate	.03⅛	.03⅜	.03⅛	.03⅜	.03⅛	.03⅜
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03½
38-40 Refinery Fuel Oil	.80	.85	.80	.85	.80	.85
GULF COAST (South Texas)—						
Gas Oil	.04	.04¼	.04¼	.04¾	.04½	.05
Fuel Oil	1.45	1.50	1.50	1.60	1.60	1.80
PENNSYLVANIA—						
30-34 Fuel Oil	.05		.05	.04¾	.05	
36-40 Fuel Oil	.05¼		.05¼		.05¼	
CALIFORNIA—						
33-36 Distillate	.03¾	.04¼	.03¾	.04¼	.03¾	.04½
27-33 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
15-20 Fuel Oil	1.40		1.40		1.40	

ROAD OILS

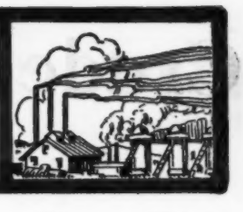
CHICAGO DIST. (Based on Group 3)—	July 29		July 22		July 15	
50-60 Asphaltic Content	.95	1.00	1.00	1.05	1.05	1.10
60-70 Asphatic Content	1.00	1.05	1.05	1.10	1.10	1.20
OKLAHOMA (Group 3)—						
40-50 Asphaltic Content	.90	.95	.95	.100	.95	.100
50-60 Asphaltic Content	.95	1.00	1.00	1.05	1.00	1.05
60-70 Asphaltic Content	1.00	1.05	1.05	1.10	1.05	1.10

NEUTRAL OILS

OKLAHOMA (Group 3)—						
Pale Neutrals:	July 29		July 22		July 15	
70-80 vis., 2½ color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
100 vis., 2 color, 20-25 cold test	.05	.05½	.05	.05½	.05	.05½
100 vis., 3 color, 20-25 cold test	.04½	.05	.04½	.05	.05½	.06
150 vis., 3 color, 20-25 cold test	.08½	.09	.08½	.09	.08½	.09
150 vis., 4 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
180 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
180 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 3 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vis., 4 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis., 3 color, 25-30 cold test	.12½	13	.12½	.13	.12¼	.13
220 vis., 4 color, 25-30 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12¾
240 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
280 vis., 3 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
280 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.08½	.09	.08½	.09	.08¼	.09
180 vis., 6 color, 23-28 cold test	.12¼	.12¾	.12¼	.12¾	.12¼	.12¾
200 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis., 6 color, 23-28 cold test	.13	.13½	.13	.13½	.13	.13½
220 vis., 6 color, 25-30 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis, 6 color, 25-30 cold test	.14¼	.14¾	.14¼	.14¾	.14¼	.14¾

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields



240 vis., 5 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
240 vis., 6 color, 25-30 cold test	.15¼	.15¾	.15¼	.15¾	.15¼	.15¾
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
180-100 vis., S. R. green, 40-45 cold test	.07½	.08	.07½	.08	.07½	.08
190-200 dark green, 40-50 cold test	.06½	.07	.06½	.07	.06½	.07
170-190 dark green, 40-50 cold test	.06	.06¼	.06	.06¼	.06	.06¼
600 E. filtered	.20	.21	.20	.21	.20	.21
590-600 Bright Stock, 150-160 vis.	.28	.29	.28	.29	.28	.29
600-610 Bright Stock, 190-210 vis.	.32	.34	.32	.34	.32	.34
Waxes:						
124-126 White Crude Scale Wax	.04	.04⅛	.03⅞	.04	.03¼	.03⅞
PENNSYLVANIA—						
150, 3 color	.20		.20		.20	
180, 3 color	.22		.22		.22	
200, 3 color	.23¾		.23¾		.23¾	
220, 3 color	.26¾		.26¾		.26¾	
600, steam refined	.17		.17		.17½	
635 steam refined	.20½		.20½		.20½	
650, steam refined	.22½		.22½		.22½	
600, Pennsylvania flash	.25		.25		.25	
630, Pennsylvania flash	.32		.32		.32½	
*550, E. filtered	.19		.19		.19½	
*600, E. filtered	.22½		.22½		.22½	
600, E filtered	.21		.21		.21½	
600, D filtered	.27		.27		.28½	
550, E filtered	.20		.20		.20	
550, D filtered	.24		.24		.24	
Pennsylvania Bright Stock	.35		.35		.35	
†122-124 White Crude, Scale Wax	.04½		.04½		.04½	
*122-124 White Crude Scale Wax	.04¼		.04¼		.04¼	

*At Warren, Penn. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.07	.08	.07½	.08½
No. 2 color, 100 vis., pale oil	.07	.08	.09½	.10½	.10	.11
No. 2 color, 150 vis., pale oil	.10	.11	.11½	.12½	.12	.13
No. 3 color, 200 vis., pale oil	.12	.13	.14	.15	.14½	.15½
No. 3 color, 300 vis., pale oil	.15	16	.14½	.15½	.15	.16
No. 3½ color, 500 vis., pale oil	.16½	.17½	.18½	.19½	.18¾	.19¾
No. 3½ color, 750 vis., pale oil	.22½	.23½	24	.25	.24¼	.25¼
No. 4½ color, 1200 vis., pale oil	.24½	.25½	.25½	.26½	.25¾	.26¾
No. 4½ color, 2000 vis., pale oil	.27	.28	.31½	.32½	.31¾	.32¾
No. 1½ color, 150 vis., pale, filtered	.20	.21	.21	.22	.21½	.22½
No. 2 color, 200 vis., pale filtered	.22½	.23½	.23½	.24½	.23¾	.24¾
No. 3 color, 300 vis., pale filtered	.25½	.26½	.26½	.27½	.26¾	.27¾
No. 3½ color, 500 vis., pale filtered	.38½	.39½	.31½	.32½	.31¾	.32¾
No. 3½ color, 750 vis., filtered	.38½	.39½	.39½	.40½	.39¾	.40¾
No. 5 to 6 color, 200 vis., red oil	.10	.11	.12	.13	.12½	.13½
No. 5 to 6 color, 300 vis., red oil	.12½	.13½	.14	.15	.14½	.15½
No. 5 to 6 color, 500 vis., red oil	.15	.16	.16	.17	.16¼	.17¼
No. 5 to 6 color, 750 vis., red oil	.19	.20	.21	.22	.21½	.22½
CALIFORNIA—						
200 vis., 2½-3 color	.15	17	.15	.17	.15	.17
300 vis., 3 -4 color	.16	.16	.16	.19	.15	.19
350 vis., 3½-4 color	.17½	.20	.17½	.20	.17½	.20
400 vis., 4 -4½ color	.19	.20	.19	.20	.19	.20
Red Neutrals:						
200 vis 4½-5 color	.13	.14	.13	.14	.13	.14
300 vis., 5 -½ color	.14	.17	.14	.17	.14	.17
400 vis., 5 -6 color	.16	.18	.16	.18	.16	.18
500 vis., 6 -6½ color	.17	.18	.17	.18	.17	.18
600 vis., 6½ plus	.18	.21	.18	.21	.18	.21

NEW YORK DOMESTIC MARKET

Motor Gasoline:	July 29	July 22	July 15
Spot Gasoline, Bayonne	.13	.13	.13
V. M. P. Naphtha, in steel barrels	.18	.18	.19
Lubricating Oil (Industrial) at refinery, Bayonne, N. J.:			
Cylinder, extra light filtered, in barrels	41½	45½	.45½
Cylinder, light filtered, in barrels	38	.39½	.39½
Cylinder, Bright Stock	.48½	.49½	.49½
Cylinder, steam refined (609)	.36½	.31½	.31½
Black, in bulk	.12	.13	.13
Bloomless, white, 30-31 gravity, 170 vis.	.44	.45	.45
Bloomless, 885 specific gravity	.16½	.17½	.17½
Red Paraffin:			
170 viscosity	.22	.23	.23
212 viscosity	.23	.25	.25
265 viscosity	.24	.25½	.25½
295 viscosity	.26	.30	.30
Paraffin, 903 specific gravity	.31	.31	.31
*Fuel Oil:			

Bunker Oil, 14 plus:
July 15, $1.75; 16, 1.75; 17, 1.75; 18, 1.75; 19, 1.75; 21, 1.75; 22, 1.75; 23, 1.75; 24, 1.75; 25, 1.75; 26, 1.75; 28, 1.75.

Diesel Oil, at refinery, gallon	.05	.05¼	.05½
Furnace Oil, tank wagon, gallon	.10	.10	.10
Gas Oil, delivered in New York	.06½	.06½	.06½
Wax, fully refined:			
120-122 a.m.p.	.05⅛	.05	.05
125-127 a.m.p	.05½	.05¼	.05¼
130-132 a.m.p.	.07	.07	.07
135-137 a.m.p.	.08½	.08½	.08½

*Literage, 6.5c a barrel extra.

NEW YORK DOMESTIC PRICES

Motor Gasoline, in cases, gallon	.27.15	.28.15	.28.15
Motor Gasoline, U. S. Navy, spec. gallon	.13	.14	.14
Naphtha, 60° F., 50-61 spec. grav.	.1425	.15.28	.15 28
Naphtha, 60° F., 63-66 spec. grav.	.16	.17	.17
Naphtha, 60° F., 66-68 spec. grav.	.17.50	.18.50	.18.50
Kerosene:			
Standard white, in bulk, gallon	.06½	.06½	.06½
Standard white, in barrels, gallon	.13½	.13½	.13½
Standard white, in cases, gallon	.16.90	.16.90	.16.90
Water white, in cases, gallon	.07½	.07½	.07½
Water white, in barrels, gallon	.14½	.14½	.14½
Water white, in cases, gallon	.17.90	.17.90	.17.90

LOS ANGELES EXPORT PRICES

Kerosene:	July 29		July 22		July 15	
Water white	.04	.04½	.04	.04½	.04	.04½

CRUDE OIL PRICES

July 25.—Indian Refining Co. and Paragon Development Co. reduced three grades of Western Kentucky crudes 10 cents.

July 26.—Magnolia Petroleum Co. adopted four gravity schedule where it buys crudes on gravity basis in Kansas, North Texas and Oklahoma, with a reduction of the higher gravities of 10 and 25 cents. Same company reduced Mexia and Corsicana crudes 10 cents. Other major buyers did not meet Magnolia schedule.

July 28.—Prairie Oil & Gas Co. reduced Oklahoma, Kansas and North Texas crudes from 15 to 25 cents. Reductions met by other major purchasers, except as noted in tables. Humble Oil & Refining Co. dropped schedule of 39° and above in North Texas.

July 29.—Ohio Oil Co. reduced Lima, Indiana, Illinois, Princeton, Plymouth and Waterloo crudes 25 cents. Imperial Oil, Ltd. reduced Canadian crudes 25 cents.

July 29.—Ohio Oil Co. and Midwest Refining Co. reduced Wyoming and Montana crudes 15 cents with the exception of Sunburst, Mont. and Salt Creek, Wyo. The reduction at Sunburst was 5 cents. There was no change in Salt Creek, according to early wires.

Arkansas and North Louisiana

Caddo, 38° and above	$1.35
35° to 37.9°	1.25
32° to 34.9°	1.15
Below 32°	1.00
Homer, 35° and above	1.35
33° to 34.9°	1.25
31° to 32.9°	1.15
Below 31°	1.00
Haynesville, 33° and above	1.25
Below 33°	1.15
El Dorado, 33° and above	1.35
Below 33°	1.25
Bull Bayou, 38° and above	1.30
35° to 37.9°	1.15
32° to 34.9°	1.00
Cotton Valley	.80
De Soto	1.35
Crichton	1.15
Bellevue	1.25
Smackover, 26° and above	.95
25° to 25.9°	.80
24° to 24.9°	.70
Below 24°	.60
*Stephens, Ark.:	
Below 23°	.85
23° to 25.9°	1.05
26° to 27.9°	1.20
28° to 31°	1.25

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo.)	1.30
Salt Creek	1.35
Big Muddy	1.10
Mule Creek	.70
Grass Creek (light)	1.55
Elk Basin	1.55
Lance Creek	1.50
Osage	1.50
Cat Creek (Mont.)	1.55
Sunburst (Mont.)	.93
Lost Soldier	.88
Greybull and Torchlight	1.50
Hamilton Dome	1.15

Lander based on contracts covering entire production of fields.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted:

Below 30°	$1.10
30° to 32.9°	1.25
33° and above	1.50
Magnolia Petroleum Co.:	
Below 28°	.90
28° to 30.9°	1.00
31° to 32.9°	1.10
33° and above	1.25
Corsicana Light	1.25
Corsicana Heavy	.90
Mexia	1.25
Powell	1.25
Thrall	1.00

Humble Oil & Refining Co.

Below 30°	$1.00
30° to 32.9°	1.20
33° to 35.9°	1.40
36° and above	1.39
Wichita and Archer Counties	1.50
Corsicana Light	1.50
Mexia	1.50
Powell	1.50
Currie	1.50

Gulf Coast

Grade "A"	$1.50
Grade "B"	1.30
Luling	1.00
Laredo	.75
Milam County	1.35
Rockdale-Minerva (Milam County)	1.60
Above 39° gravity	1.80
Calliham (Live Oak-McMullen)	1.08½

California

14° to 14.9°	$1.00
20° to 20.9°	1.01
21° to 21.9°	1.02
22° to 22.9°	1.03
23° to 23.9°	1.05
24° to 24.9°	1.07
25° to 25.9°	1.10
26° to 26.9°	1.13
27° to 27.9°	1.16
28° to 28.9°	1.19
29° to 29.9°	1.22
30° to 30.9°	1.25
31° to 31.9°	1.28
32° to 32.9°	1.31
33° to 33.9°	1.34
34° to 34.9°	1.37
35° gravity and above	1.40

Eastern States

Penna Grade Oil in New York Transit Lines	$3.25
Bradford District Oil in National Transit Lines	3.25
Penna Grade Oil in National Transit Lines	3.00
Penna Grade Oil in Southwest Pa. Pipe Line Lines	3.00
Penna Grade Oil in Eureka Pipe Line Lines	3.00
Penna Grade Oil in Buckeye Pipe Line Lines	3.00
Cabell Grade Oil in Eureka Pipe Line Lines	1.60
Corning Grade Oil in Buckeye Pipe Line Lines	1.90
Somerset Medium Oil in Cumberland Pipe Line Lines	1.70
Somerset Light Oil in Cumberland Pipe Line Lines	1.35
Ragland Grade Oil in Cumberland Pipe Line Lines	1.00
Lima	1.83
Wooster	1.80
Illinois	1.62
Indiana	1.63
Princeton	1.62
Plymouth	1.00
Waterloo	1.10
†Oil Springs, Canada	2.30
†Petrolia, Canada	2.23
*Western Kentucky, 36° and above	1.55
*Western Kentucky, 33° to 35.9°	1.45
*Western Kentucky, 32.9° and below	1.35
Cumberland and Monroe Counties, (Ky.), (Paragon Dev. Co.)	1.85

†Plus Government bounty of 52½c.

*Prices for Warren, Allen, Hancock, and Ohio Counties by Indiana Refining Co. Prices for Warren and Simpson Counties by Paragon Development Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)	$1.40
†Panuco (f.o.b. Mexican ports)	1.15
Tuxpam (New York)	1.97
Panuco (New York)	1.57

*Plus 31.92c tax. †Plus 17.40c tax. Prices based on contracts.

Crude Oil Pipe Lines of United States

Enormous Growth, Starting Under Great Handicaps in East, Followed Oil Field Development Throughout Entire Country

By Charles E. Bowles

If all of the "trunk" pipe lines and all of their "gathering" lines that connect the oil producing properties with the refineries of the United States were placed end to end, they would easily reach three times around the world.

But mileage is only symbolic of the real story—the vital fact is, that pipe line building has followed crude oil production so closely that today practically every barrel of oil that leaves the "lease tanks" travels anywhere from a few miles to 1,700 miles, through gathering lines and trunk lines, before it reaches its final destination—the refinery.

From the drilling of the Drake well, in August 1859, to the close of the year 1875, a period of 16 years, all of the oil produced in the United States came from Pennsylvania and New York—and almost all from Pennsylvania.

From 1859 to 1865 there were no pipe lines in the United States—and in those six years about 14,000,000 bbls. of oil were produced. The first problem of the oil pioneers was storage, the second problem transportation. The building of storage tanks was comparatively easy—but they spent six years in time and about $14,000,000 in money (for teaming at a dollar a barrel) before they built the first successful pipe line to handle the oil by mechanical power intsead of by human and animal power.

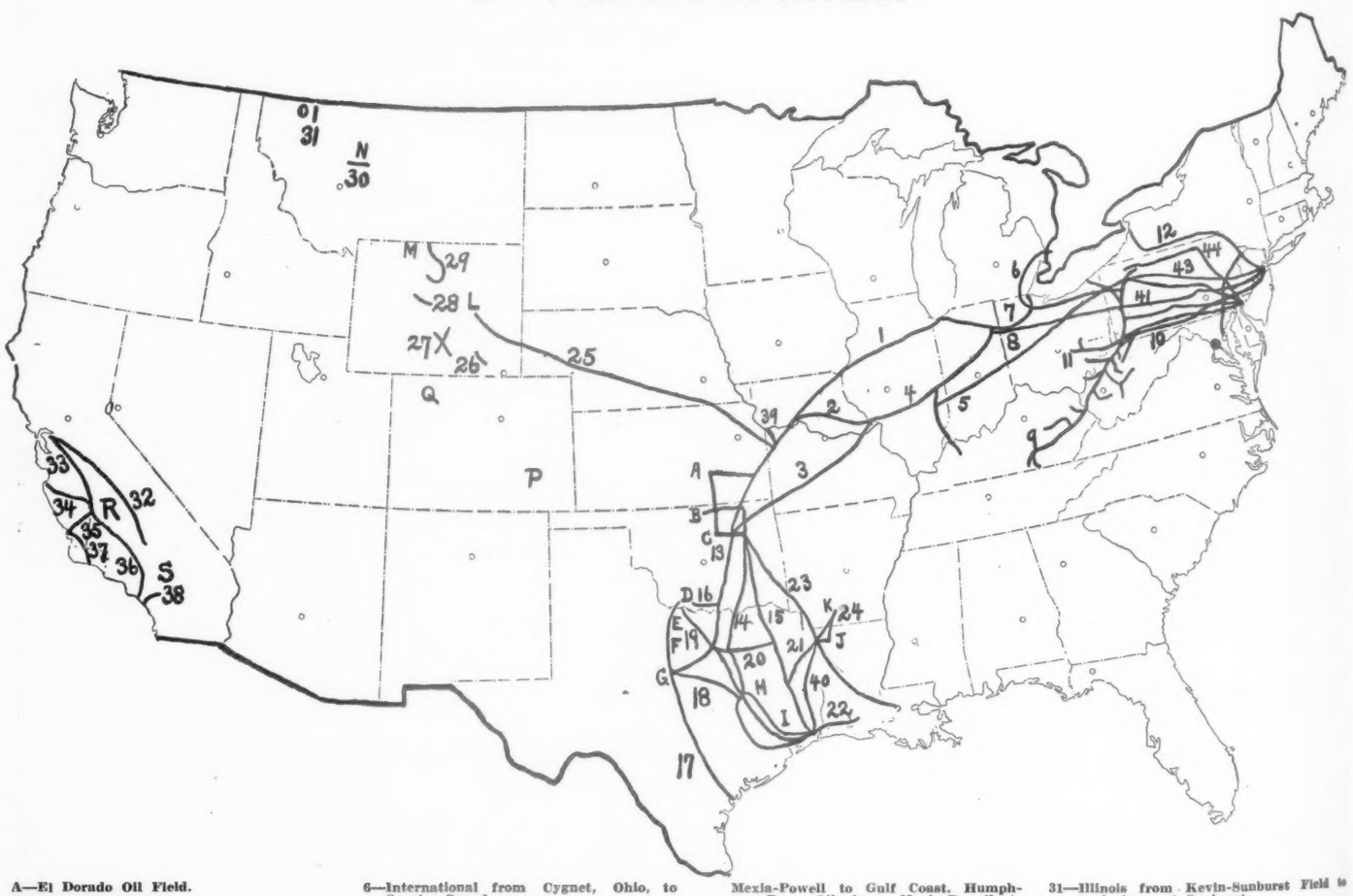
Different Last Year

In the one year of 1923 we produced and moved through pipe lines more than 50 times as much crude oil as they produced from 1859 to 1865 and moved with teamsters and flatboatmen.

In 1861 Herman Janes of Erie, Pa., proposed a 4-inch wooden pipe line from Tarr farm to Oil City—but the line was never built. In 1862 a bill providing for State aid in the building of pipe lines was introduced into the Pennsylvania Legislature—and defeated by the teamsters' lobby. During the same year J. L. Hutchings built a 2-inch line 2½ miles long from Tarr farm to the refinery at Plumer, only to have it torn up by the teamsters. The next year he built a second line—which the teamsters promptly tore up. The production that year was over 2,500,000 bbls., the average "transportation rate" $1 a barrel, the oil producing area comparatively small, and

(Continued on Page 160)

KEY TO PIPE LINES AND OIL FIELDS



A—El Dorado Oil Field.
B—Tonkawa and Osage.
C—Northern Oklahoma.
D—Southern Oklahoma
E—Burkburnett and Electra.
F—Breckenridge.
G—Ranger.
H—Mexia, Powell, Corsicana.
I—Gulf Coast.
J—Caddo, Homer, Haynesville.
K—El Dorado, Smackover.
L—Salt Creek.
M—Elk Basin.
N—Cat Creek.
O—Sunburst.
P—Florence.
Q—Craig.
R—San Joaquin Valley.
S—Los Angeles Basin.

1—Prairie from Mid-Continent to Whiting and the Atlantic seaboard. Sinclair from Mid-Continent to East Chicago.
2—Prairie from main line to Wood River, Ill.
3—Ozark (Roxana) from Oklahoma to Wood River.
4—Prairie from Wood River through Illinois and connecting with Standard lines to Atlantic seaboard.
5—Tide Water from Illinois fields through 43 to Bayonne.
6—International from Cygnet, Ohio, to Sarnia, Canada.
7—Prairie from Mid-Continent (through 1, 2 and 4) to Toledo. Has Standard connections to Atlantic seaboard.
8—Illinois from Wood River (through 4), with Standard connections to Atlantic seaboard.
9—Cumberland from southern Kentucky (through 10) to Atlantic seaboard.
10—Southern (continuing Cumberland P. L.) to Atlantic seaboard.
11—Pure Oil from southern Ohio to Marcus Hook (Philadelphia). Line over No. 10 is Pure Oil through Pennsylvania.
12—New York transit from Olean, N. Y. to Bayonne. Branch from Olean to Buffalo.
13—Magnolia, Ozark, Sinclair and Prairie, connecting northern Oklahoma with southern Oklahoma and north Texas.
14—Texas from northern Oklahoma to Port Arthur.
15—Gulf from northern Oklahoma to Port Arthur.
16—Pipe line connections from Healdton, Hewitt, Duncan and Walters Fields to north and south.
17—McCorkle (building) from Duncan, Okla., to Aransas Pass, Tex.
18—Sinclair, Humble from Ranger via Mexia-Powell to Gulf Coast. Humphreys-Pure Oil from Mexia-Powell to Gulf.
19—Texas, Magnolia from north central Texas to Gulf Coast.
20—Gulf from Ranger to main line (15) to Port Arthur.
21—Gulf from northern Louisiana to main line (15) to Port Arthur.
22—Texas from southern Louisiana to Port Arthur.
23—Oklahoma, Prairie, Standard of Louisiana from northern Oklahoma, southern Arkansas and north Louisiana to Baton Rouge.
24—Numerous lines from El Dorado and Smackover, through Homer, Haynesville and Shreveport to Gulf Coast.
25—Sinclair from Salt Creek to main line at Freeman, Mo.
26—Illinois from Rock Creek Field to railroad at Laramie.
27—Illinois from Lost Soldier and Ferris Fields to railroad at Fort Steele. Producers and Refiners from Ferris and Lost Soldier Fields to Parco.
28—Illinois from Pilot Butte Field to Riverton.
29—Illinois from Elk Basin to Greybull. Illinois from Grass Creek to Greybull.
30—Mutual from Cat Creek to Winnett.
31—Illinois from Kevin-Sunburst Field to tank farm at Sunburst.
32—Standard of California from Kern River to Richmond. Associated from Kern River to Port Costa.
33—Shell from Coalinga to Martinez.
34—Associated from Coalinga to Monterey.
35—Producers from Junction to Port San Luis.
36—General from Lost Hills, McKittrick and Midway-Sunset Fields to Los Angeles
37—Union from Orcut to Port San Luis. Associated from Santa Maria to Gaviota. Associated from Cat Canon to Gaviota.
38—Numerous lines from the oil fields of the Los Angeles Basin to the refineries and San Pedro harbor.
39—Standard from main line to Sugar Creek, Mo. Sinclair from main line to Kansas City, Kan.
40—Texas from northern Louisiana to Port Arthur.
41—Tuscarora to Atlantic seaboard.
42—National Transit to Philadelphia. Line is between 41 and 43.
43—Tidewater to Bayonne. Continuation of No. 5 from southern Illinois.
44—United States pipe line from northwestern Pennsylvania to Philadelphia.
45—Crescent from western Pennsylvania to Marcus Hook. Line is directly below No. 41.

Course of Oil Securities in Year Past

Marked by Violent Fluctuations, Three and a Half Months Upward and Eight and a Half Months Irregularly Downward

By N. O. Fanning

NEW YORK, July 25.—During the past 12 months oil stocks have shown violent fluctuations. Using The Oil and Gas Journal's weekly index number, which is the average price of 20 representative oil stocks listed on the New York Stock Exchange, the course of prices can be traced easily. At the close of June the average, which stood at around 47, is slightly more than one point over the corresponding period of 1923. But in the intervening time, the index fell almost to 41 in September, 1923, and rose to a peak of over 57 in February, 1924. That sums up the trend for the 12 months.

An examination of the chart shows that there has been one major upswing during the year ended June 30, 1924, which began in October and ended in February, a period of about three and a half months. During the remaining eight and a half months, the tendency was downward, although with much irregularity.

The low point at which the index stood this year was 46.77 on April 22. The high point was 57.46 on February 5.

During the period of the upswing, the trading was much heavier than during the periods preceding or following. This might indicate the possibility that many who purchased oil securities on the rise still have their stocks in the hope that another upswing may take place in the near future. If conditions in the oil business grow worse from now on, the likelihood is that such holders will sell and that the downward movement which started in February will continue.

Standard Oils Feature

During the period under review, the action of the stocks of the companies designated as belonging to the Standard Oil group constitutes the most interesting feature of the market for oil securities. In considering the Standard Oil stocks, the change in their status marketwise must be mentioned. During 1919, 1920 and 1921 the stocks of several large Standard Oil companies were for the first time officially listed on any stock exchange. The principal ones were Standard Oil of New Jersey common, Standard Oil of California common, and Atlantic Refining common. When these stocks were listed the capitalization of the companies was different than at present. The following table shows the change clearly:

	When Listed		Now	
	*Capital	Par	*Capital	Par
S. O. of N. J.	$ 983,383	$100	$20,083,968	$25
S. O. of Cal.	4,038,844	25	9,308,172	25
Atlantic Ref.	50,000	100	500,000	100

*Number of common shares outstanding.

The gain in number of shares of stock outstanding as indicated above was brought about largely by the declaration of stock dividends, in the case of Standard Oil of New Jersey 400 per cent, Standard of California 100 per cent and Atlantic Refining 900 per cent. In addition the number of shares of New Jersey was quadrupled by the reduction in par value from $100 to $25 per share.

Prior to 1920 the stocks of these companies were quite closely held and the price of the shares was so high that trading in them was limited. Standard of New Jersey stock sold for more than $700 per share and Atlantic Refining for more than $1,500 at one time.

However, the large increase in number of shares accruing to old holders of stock has brought about a peculiar market situation. Many of these holders have, apparently, sold considerable of their new shares for one reason or another. The depression in the oil business resulted in a certain amount of liquidation on the part of the more timid holders. In some cases, liquidation on the part of large estates has evidently taken place, such as that of William Rockefeller and William G. Rockefeller.

The result now is that in all probability there is a much larger number of shares available for trading than formerly, although the trading is not proportionately greater as figured in par value. As the chart indicates that there has been only three and a half months of buying as against eight and a half months of selling during the last year, the tendency probably has been toward greater distribution of shares, rather than contraction.

Featuring the activity of the Standard Oil group is Atlantic Refining common, which after selling up from a low in 1923 of 98⅝ to a high this year of 140⅛, dropped gradually to around par, and then fell almost precipitately to a low of 84½ within a few weeks.

This follows a period when Standard Oil of New Jersey common was under liquidation, and dropped to 33, against a high of 42¼. In neither case has the price of the shares shown any marked recovery from the lows.

The selling in both cases seems to have had something to do with the circumstances above described rather than to any development in the financial affairs of the companies the conservatism of whose management is a by-word in Wall Street.

Low Priced Issues Advance

Another interesting feature of the oil securities market during the last year has been the recent advance in price of many so-called low-priced issues in the face of a decline in prices of higher-priced oil shares. Superior Oil common advanced from 2⅝ to 7, Transcontinental from 3¾ to 6¼ and Indian Refining from 3¾ to 7. Middle States Oil stock, after rising earlier in the year to 6⅞, dropped to 1¾.

Vacuum Oil

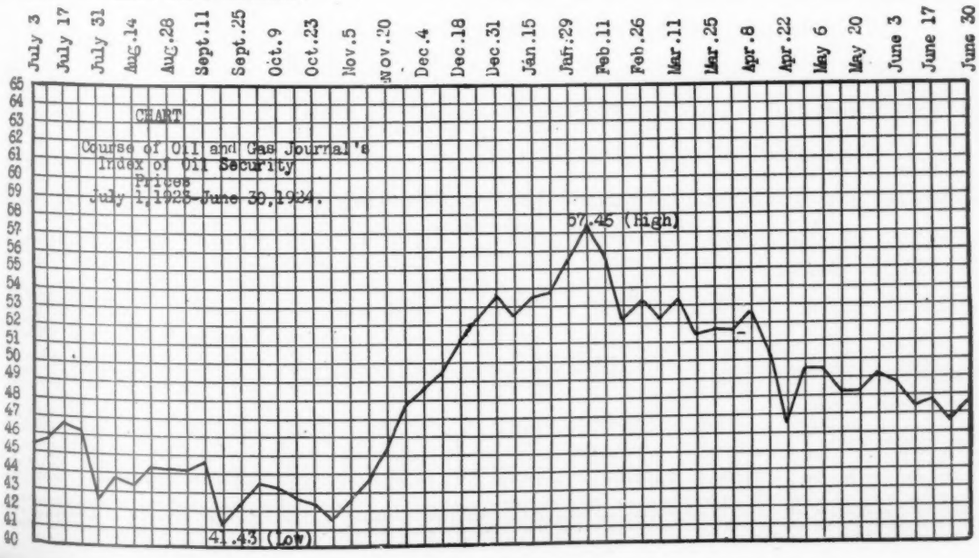
On the curb market, Vacuum Oil was the leader of the Standard Oil group. During a rather trying period from the viewpoint of securities, Vacuum Oil distributed extra dividends, and the stock responded by continued strength, selling close to 70 against a low of 56½. Vacuum Oil is the only company of its size dealing almost exclusively in lubricants, selling its products throughout the world. Therefore, the prosperity it has enjoyed in recent months is of particular interest.

The Outlook

Despite the fact that the oil business has been somewhat depressed and that the oil companies have had to carry large burdens in the form of oil in storage, new financing has been comparatively small. The California companies completed considerable of what financing was done, through the sale of new stock or bonds. With California oil production decreasing, the outlook is particularly bright for the concerns in that group.

As everyone connected with oil knows, the industry has been harassed more than ever by politicians, which has not helped it any. A Republican victory might be expected to bring reassurance to the industry to a certain extent, but so long as there is a radical group holding the whip-hand in Congress, the situation could conceivably grow worse, instead of better. Nor must the fact be lost sight of that there are those within the industry who are advocating radical measures looking at least indirectly toward Government control of the oil business.

With these admittedly unfavorable possibilities overhanging many investors hesitate putting their funds in oil securities, but, despite this, the outstanding fact is that once the law of supply and demand becomes more equitable, prices are bound to improve, if only for a short time. The law of supply and demand transcends politics as a market factor.



MOTOR BUYING KEEPING UP

Previous experience shows that mid-year figures are not conclusive as indicating the number of motor cars that actually went into consumption during the period. Last year, for instance, on July 1 registrations were 13,048,128 against 12,237,378 on December 31, 1922, a gain of only 809,750, although the full year's increase was 2,853,799. The disparity between mid-year figures and year-end figures is accounted for by different methods of law enforcement and a difference in the method of compiling registrations in individual States.

Compared with the figures of July 1, 1923, this year's total shows a gain of 2,419,051. In the preceding 12 months the gain was 2,440,001. These figures which form a more accurate basis for comparison would indicate that automobile buying in the past 12 months has been only slightly lower than in 12 months previous.

TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, July 29

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
†100 gals or more	15.25	...	19 0	12.0
Decatur, Ill.	17.2	...	19.2	12 5
East St. Louis	15.1	...	19.35	11.6
Joliet	17.4	...	19.4	12.7
Peoria	17.2	...	19.2	12.5
Quincy	16.2	...	18.2	12.3
Davenport, Ia.	15.5	...	20.5	12 9
Des Moines	16.0	...	18.5	12.9
Keokuk	16.5	...	18.5	12.9
Sioux City	15.0	...	18.0	12.5
Duluth, Minn.	18.2	...	20.2	13.6
Minneapolis	12.0	...	16.0	13.6
La Crosse, Wis.	18.2	...	20.2	13.4
Milwaukee	15.0	...	18.0	12.3
Madison	17.3	...	19.3	12.5
Detroit, Mich.	17.8	...	19.8	13.2
Grand Rapids	17.7	...	19.7	13.1
Saginaw	17.9	...	19.9	13.3
Evansville, Ind.	19.0	2.0	21.0	12 5
Fort Wayne	19.4	2.0	21.4	12.9
Indianapolis	19.2	2.0	21.2	12.7
South Bend	19.4	2.0	21.4	12.9
Fargo, N. D.	18.8	1 0	20.8	15.6
Huron, S. D.	21.0	2.0	23.0	14.1
Sioux Falls	18.0	2.0	20.0	13.6
*Kansas City, Mo.	12.9	1.0	20.9	11.3
Springfield	16.8	...	18.8	12.2
*St. Louis	15.6	0.5	18.9	12 0
*St. Joseph	16.0	0.5	18.0	11.9
Wichita, Kans.	15.3	...	19.8	11.8
Bartlesville, Okla.	18.4	2.5	21.4	10.9

*City tax.
†Tank wagon price on less than 100 gallons, 17c.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Newark, N. J.	17.5	...	....	13.0
Atlantic City	17.5	...	....	13.0
Annapolis, Md.	19.0	2.0	21.0	12.5
Baltimore	19.0	2.0	21.0	12.5
Cumberland	19.0	2.0	21.0	12.5
Washington, D. C.	19.0	2 0	21.0	12.5
Norfolk, Va.	20.5	3.0	22.5	13.5
Petersburg	20.5	3.0	22 5	13.5
Danville	20.5	3.0	22.5	13.5
Richmond	20.5	3.0	22.5	13.5
Roanoke	20.5	3.0	22.5	13.5
Keyser, W. Va.	19.0	2.0	....	13.5
Charleston	19.0	2.0	....	13.5
Parkersburg	19.0	2.0	....	13.5
Wheeling	19.0	2.0	....	13.5
Charlotte, N. C.	20.0	3.0	....	12.5
Hickory	20.0	3.0	....	13.5
Mt. Airy	20.0	3.0	....	13.5
Salisbury	20.0	3.0	....	13.5
Charleston, S. C.	20.5	3.0	....	14.0
Columbia	20.5	3.0	....	14.8

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Atlanta, Ga.	20.0	3.0	24.0	14.0
Augusta	22.0	3.0	24.0	14.5
Macon	22.0	3.0	24.0	15.5
Savannah	18.0	3.0	20.0	14.0
Birmingham, Ala.	20.0	2.0	22.0	15.5
Mobile	19.0	2.0	21.0	13.5
*Montgomery	21.0	3.0	23.0	16.5
Clarksdale, Miss.	19.0	3.0	22.0	14.0
Jackson	19.0	3.0	22.0	10.0
Natchez	18.5	3.0	21.5	13.5
Vicksburg	18.5	3.0	21.5	13.5
Jacksonville, Fla	20.0	3.0	22.0	14.0
Miami	22.0	3.0	24 0	15.5
Pensacola	20.0	3.0	22.0	14.5
Tampa	20.0	3.0	22.0	14.0
Lexington, Ky.	21.0	3.0	23.0	15.0
Covington	20.0	3.0	22 0	15.0
Louisville	19.0	3.0	21.0	14.0

*In addition to State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PACIFIC COAST DISTRICT

Stadard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
an Francisco	17.0	2.0	20.0	15.5
Los Angeles	16.0	2.0	19.0	15.5
Fresno	17.5	2.0	20.5	17.5
Reno, Nev.	20.5	2.0	23.5	19.0
Portland, Ore.	19.0	3.0	22.0	16.5
Seattle, Wash.	18.0	2.0	21.0	16.5
Tacoma	18.0	2.0	21.0	16.5
Spokane	22.0	3.0	25.0	20.5
Phoenix, Ariz.	23.0	3.0	26.0	21.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Dallas, Tex.	14.0	1.0	18.0	10.0
Fort Worth	14.0	1.0	17.0	11.0
Houston	16.0	1.0	19.0	12.0
San Antonio	14.0	1.0	17.0	10.0
El Paso	12.0	1.0	14.0	12.0
Muskogee, Okla.	16.0	2.5	21.0	11.0
Oklahoma City	15.5	2.5	20.5	11.0
Tulsa	13.0	2.5	18.0	11.0
Ft. Smith, Ark.	17.0	4 0	20.0	12.0
Little Rock	20.0	4.0	23.0	13.0
Texarkana	19.0	4.0	22.0	12.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero Tank wagon
Denver, Colo.	19.0	2.0	21.0	13.5
Glenwood Spgs.	23.0	2.0	....	17.5
Pueblo	19.0	2.0	21.0	14.5
Billings, Mont.	21.5	2.0	23.5	14.5
Butte	23.0	2.0	25.0	15.0
Great Falls	23.0	2.0	25.0	16.0
Helena	23.0	2.0	25.0	16.0
Miles City	22.5	2.0	24.5	16.5
Boise, Idaho	24.5	2.0	26.5	20.0
Salt Lake, Utah	24.0	2.5	26.0	17.5
Ogden	24.0	2.5	26.0	17.5
Basin Wyo.	20.0	1.0	....	14 0
Casper	18.0	1.0	20.0	12.0
Cheyenne	19.5	1 0	21.5	13.5
Cody	21.0	1.0	....	15.0
Lander	20.0	1.0	....	14.0
Albuquerque, N M	21.0	1.0	23.0	16.5

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
*Pittsburgh, Pa.	18.0	...	23.0	14.0
*Philadelphia	18.0	...	23.0	14.0
*Scranton	18.0	...	23.0	14.0
*Allentown	18.0	...	23.0	14.0
*Altoona	18.0	...	23.0	14.0
Dover, Del.	20.0	2.0	23.0	14.0
Wilmington	20.0	2.0	23.0	14.0
Providence, R. I.	20.0	...	23.0	14.0
Springfield, Mass	20.0	...	23.0	14.0
Worcester	20.0	...	23.0	14.0
Boston	20 0	...	23.0	14.0
Hartford, Conn.	21.0	...	24.0	14.0
New Haven	21.0	1.0	24.0	14.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Omaha	13.6	...	15.0	12.5
Crawford	18 0	...	....	13.25
McCook	16.75	...	18.75	14.0
Norfolk	16.75	...	18.75	13.0
North Platte	16.0	...	18.0	12.75
Scotts Bluff	18.25	...	20.25	13.25

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Albany, N Y.	17.0	...	21.5	13.0
*New York	19.0	...	22.0	13.0
Buffalo	15.5	...	18.5	13.0
Rochester	15.0	...	19.0	12.0
Syracuse	16.0	...	21.0	11.0
Boston, Mass.	17.0	...	20.0	13.0
Providence, R. I.	18.0	...	22 5	13.0
Augusta, Me.	19.0	1.0	21.5	13.0
Manchester, N. H.	19.0	2.0	21.5	13.0
Burlington, Vt.	19.0	1.0	21.5	13.0

*Price in steel barrels.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
New Orleans, La.	14.5	1.0	17.5	9.0
Alexandria	15 5	1.0	19.5	13.0
Baton Rouge	15.0	1.0	18.0	11.5
Lake Charles	16 5	1.0	19.5	13.0
Shreveport	16.5	1.0	19.5	13.0
Memphis, Tenn.	16.0	2.0	18.0	14.0
Chattanooga	18.5	2.0	20.5	14.5
Knoxville	19.5	2.0	21.5	15.0
Nashville	18.5	2.0	20.5	13.5
Bristol	20.0	2.0	22.0	13.5
Little Rock, Ark.	20.0	4.0	22.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
All Ohio Points.	17.0	...	19.0	14.0

TANK WAGON CHANGES

Note: Due to numerous "price wars" in several of the marketing areas, considerable difficulty has been experienced in obtaining timely reports on changes. No reports are carried in the accompanying tables until definitely announced by the companies whose names are given.

July 22.—Standard Oil Co. of New York reduced kerosene tank wagon price in entire territory 1 cent.

ROYAL DUTCH SHELL IN PERU,

WASHINGTON, July 26.—State Department officials are endeavoring to ascertain what concessions, if any, the Royal Dutch-Shell interests are acquiring in Peruvian oil domains. In the absence of official information the State Department has asked for a detailed report on all foreign oil activities from American Ambassador Poindexter at Lima.

NORTH TEXAS MARKET ALMOST UNCHANGED

FORT WORTH, Tex., July 28.—Conditions in the refined oil market are practically unchanged. All grades of lighter oils lost around ¼ cent and the demand continued sluggish. One large refiner sold 100 cars of 64-66, 375 end point at 9½ cents. Fuel oil held its own. Kerosene unchanged. Gas oils scarce, only single car orders accepted. With crude developing a distressed condition, refiners were inclined to watchful waiting.

The market was decidedly soft for New Nevy Gasoline. 8 cents flat, with little moving, inquiries slow and plenty on hand to take care of spot orders.

Quotations on 64-66, 375 end point gasoline decreased ¼ cent; 9¾ to 10 cents controlled all sales wit hthe exception of one of 100 cars for immediate delivery at 9½ cents.

Natural gasoline slipped ¼ cent. Grade A is quoted at 7¼ to 7½ cents a gallon, Grade B. 6¾ to 7 cents and Grade C, 6½ to 6¾ cents; demand weaker, with plenty in stock in the Stephens and Eastland county districts.

Fuel oil continued bearish, one order of 20 cars, immediate shipment, was reported placed with a Wichita Falls refinery at 75 cents a barrel; all other sales were at 80 cents flat, sellers' cars. Kerosene continued at 4 cents for water white, though the demand was a trifle softer. Only a few sales were made and inquiries for quotations decreased materially. A few single car orders for gas oil were placed at 2¾ cents, offers of 2⅝ cents were in most cases refused.

REPORT IMPROVEMENT IN OIL CITY MARKET

OIL CITY, Pa., July 28.—There has been a real improvement noted in the northwestern Pennsylvania refined district during the past week, despite the second reduction in the gasoline tank wagon market.

Kerosene and gasoline are both moving even better than during the past weeks and the consumption of gasoline especially has been greater with the arrival of warmer weather, which has made motor camping trips a real pleasure.

Wax is the brightest feature of the market. It is all sold up in the local territory and much of it is moving. All the refineries are practically sold out of this product.

Fuel oil is moving much better at the present prices. Cylinder stocks have become more firm with an increase in inquiries, according to some refiners, while others contend there has been no change in the situation relating to it. Neutrals continue quiet at the prevailing market prices. Naphtha is firm.

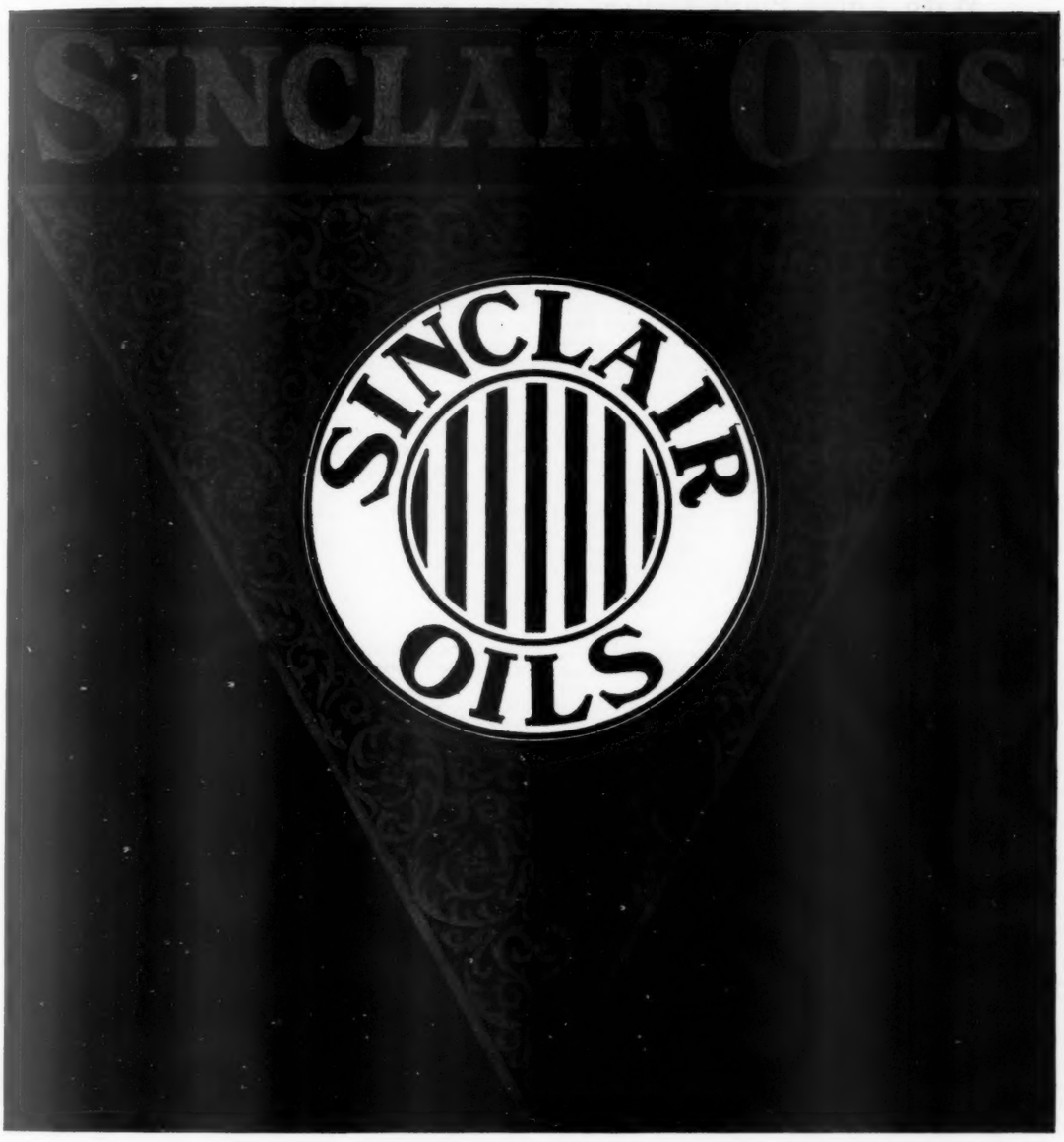
MID-CONTINENT REFINERY OPERATIONS FOR WEEK ENDING JULY 19

Gasoline output and stocks as reported by 141 Mid-Continent refiners made encouraging reductions during the week ending July 19, according to the regular report of the Western Petroleum Refiners' Association. A decrease of 1,685,649 gallons or 5.83 per cent in output was reported, which coupled with a decrease of only 0.53 per cent in shipments was responsible for a drop of 5,378,135 gallons or 4.13 per cent in gasoline stocks. The kerosene output increased 344,787 gallons or 5.25 per cent during the week, while the shipments fell off 15.07 per cent, contributing to an increase of 1,480,941 gallons or 6 96 per cent in kerosene stocks. The output of gas oils and fuel oils increased 1,194,936 gallons or 3.75 per cent and shipments decreased 10 45 per cent, causing an increase of 3,274,671 gallons or 3.19 per cent in stocks. Total oils run to stills dropped to 1,835,495 bbls, a decline of 33,202 bbls. or 1.78 per cent.

CONSOLIDATED STATEMENT COVERING MID-CONTINENT REFINERIES FOR THE WEEK ENDING 7 A. M., JULY 19, 1924

	Kansas	Oklahoma	North and Central Texas	North Louisiana and Arkansas	Mid-Continent Total	July 12, '24	June 21, '24	May 24, '24
Number of refineries reporting	27	62	42	10	141	141	141	139
Daily still capacity (bbls.)	102,600	265,700	105,550	25,000	498,850	498,850	498,850	483,850
Combined operations during week:								
Materials to stills (bbls.):								
Crude, item A	356,220	834,149	366,304	85,699	1,642,372	1,630,859	1,722,606	1,553,937
Other oils (see note), item B	38,019	117,465	23,209	14,430	193,123	237,838	197,816	181,589
Total	394,239	951,614	389,513	100,129	1,835,495	1,868,697	1,920,422	1,735,526
Output (gallons):								
Gasoline, item C	6,532,042	14,125,062	5,651,226	926,591	27,244,921	29,930,570	28,157,105	25,547,277
Kerosene, item D	1,624,776	3,786,433	1,192,451	303,460	6,907,120	6,562,333	5,906,578	4,956,665
Gas and Fuel oil, item E	7,500,182	15,353,973	8,255,969	1,917,749	33,027,873	31,832,937	35,830,022	29,946,346
Stocks on hand at close of week:								
Materials for stills (bbls.):								
Crude, item J	513,288	4,099,839	1,171,641	819,646	6,604,414	6,738,369	6,986,437	7,053,455
Other oils (see note), item K	104,201	1,282,178	216,246	610,785	2,112,910	2,053,366	2,021,918	2,002,553
Finished products (gals):								
Gasoline, item L	14,501,632	94,156,483	15,450,701	747,051	124,855,867	130,234,002	139,097,902	142,749,799
Kerosene, item M	4,590 923	13,041,555	4,988,120	123,976	22,744,574	21,263,633	20,447,773	18,187,373
Gas and fuel oil, item N	12,436,444	76,723,094	14,297,083	3,448,999	106,905,620	102,630,949	103,675,216	96,533,736

Note—Other oils includes all oils other than crude which are either purchased or withdrawn from stocks and run to stills during the week. The total of items A and B is, therefore, the net quantity of materials consumed by the reporting refineries in producing the quantities of products shown as the result of the operations of the refiners during the week. Item K includes all stocks of oils, other than crude held for further refining.



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Oklahoma Wildcatting Brings Results

Nine New Pools Opened During First Six Months of 1924 With Three Pools Making More Than 15,000 Barrels Each

By C. D. Lockwood

Whenever wildcatters put on a strenuous campaign to find new oil, it seems that they always find it. The results of the activity started last year, and the apparent success of the efforts that were begun on such a large scale this spring certainly seem to substantiate this theory and the flood of oil that flowed in an ever increasing stream from the new pools that were discovered just before the close of 1923 was a vital factor in the overproduction situation that disturbed the market toward the end of June.

A brief summary of the outstanding developments in the Oklahoma fields during the first six months of 1924 includes the following: Three new fields broke into the major class—Cromwell, Graham-Fox and Stroud—and another, the Pettit Pool in Osage County, could have produced 15 000 bbls. daily, had all of the wells been opened up; nine new pools were opened up during the six months, including Wilcox sand pools, which resulted from deeper drilling in old fields; seven wildcats uncovered important showings, the extent of which has not been fully determined by further drilling; the Burbank Field had its last fling above the 100 000-bbl mark shortly after the famous "gentlemen's agreement" was abrogated in January, and also caused a record breaking Osage lease auction in which the bids totaled more than $14.000.000; the Tonkawa Field declined rapidly until rejuvenated by the discovery by T. B. Slick and the Comar Oil Co. of a 4.000-foot sand which gave every indication of being nearly as extensive as the shallower formations since the three wells which had succeeded in reaching it were averaging better than 7.500 bbls. together; the Hewitt Field supplied one of the biggest discouragements ever offered to a producer when the Carter Oil Co.'s deep sand gushers went dead and were never revived to any extent; and to cap the list, the deepest hole ever drilled in the State was sunk a foot more than a mile in depth in Hughes County.

Cromwell Pool Development

The development of the Cromwell Pool in northern Seminole County, was perhaps the greatest achievement of the first half of the year. Starting in January with only one well in the productive part of the field and another small well making about 50 bbls. from what later turned out to be the edge of the structure, the field's production had climbed to 33.082 bbls. from 34 producing wells on July 2 and was still on its way up as the pool was undefined except to the south, and indications were that the structure would prove to be comparable to that at Tonkawa in extent. Toward the latter part of June, the trend of the play was swinging around to the east as correlations of sands found in the field and those found in a duster 3 miles to the east led geologists to the conclusion that the structure had an east dip. The Burke-Greis well on the northeast side also changed the play as it found 100 bbls. an hour production beneath a thick 50.000.000-foot gas sand. The thickest sand found during the first six months was in the Roxana Petroleum Co.'s No. 2 Brown, in the SW cor. Section 10-10-8, which penetrated 105 feet of the pay formation, 40 feet of which carried oil. The most surprising feature of this field was the discovery that the structure which had been dipping to the northwest, started to rise again as it crossed the NE of the NE of Section 16.

The drilling campaign that brought the Cromwell Field into the major class about June 1, was really started by the Gypsy Oil Co.'s No. 1 Pearlie Stidham, NE cor. NW SW, Section 15-10-8, west offset to the discovery well. The Gypsy producer came in about March 8, and was good for 1,500 bbls. Shortly after the end of June, the discovery well was deepened by the Carter Oil Co., who purchased it from Joe I. Cromwell, an increased to 90 bbls. an hour.

Rise of Stroud Field

Next to the Cromwell Field in importance was the development of the Stroud Field in eastern Lincoln and western Creek Counties. Starting the year with two wells totaling about 2.000 bbls. daily, this promising Wilcox Pool looked like a world beater for a while, having a wonderful body of sand and heavy saturation, but the wells declined sharply in spite of this fact, and on July 2, with 23 wells contributing to the output, it was producing only 22.236 bbls. daily. The Stroud Field passed the 15.000-bbl. mark into the major class about the middle of May, some two weeks before the Cromwell Pool attained its majority. The peak of production at Stroud came during the week ended June 11 when its average was 24.763 bbls. daily, a mark which the field will never attain again in the opinion of experts who have followed it closely. At the close of June, the field appeared to be rather clearly defined on the southwest, west and northwest, and while it still had considerable room to spread out to the southeast and narthwest, it was not expected to go far. The steep decline curve of the Stroud wells, even considering its Wilcox characteristics, was one of the surprises of the season.

Some excitment attended the discovery of heavy oil about six miles south of Stroud Field by the H. F. Wilcox Oil & Gas Co. in its No. 1 Smulian, NW cor. SE NW, Section 2-13-6, as there is heavy oil above the deep pay at Stroud, but the drill went into water at 4.270 feet and the hole was plugged back to the sand at 5.225-29 feet, where it pumped 70 bbls. of low gravity crude.

The Wetumka Pool.

The Papoose-Gilcrease area, also known as the Wetumka Pool, just west of Wetumka in Hughes County, had numerous ups and downs during the six months. Starting the year with just two wells making a total of about 400 bbls. daily, and about three miles apart the area was divided in the middle by a 3,425-foot duster in the SW cor. NW, Section 9-9-9, drilled jointly by the companies which discovered the field. Several wells for 50 to 75 bbls. an hour initial production enhanced the prospects at various times but they fell off quickly or went to water, and the freakish and treacherous nature of the area was displayed time and again. Examples of these were the Gilcrease Oil Co.'s No. 1 Simon, in Section 17-9-9, which came in about April 15 making 30 bbls. an hour and the Arkansas Fuel Co.'s No. 1 Brown, in Section 18, which arrived about April 20 and gauged 1,476 bbls. the first day. Three wells were acclaimed as indications that the big pool would be found to the west, but within a couple of weeks they both had fallen off to an extremely low figure and were apparently tapping the ocean. As June ended, there were still many possibilities of extending the producing areas both in the Papoose and Gilcrease Sectors, and some geologists forecast the eventual union of the Papoose and Cromwell Pools.

There was one well, however, which startled the producers in the Papoose territory and which held up remarkably well. It was the Berry Petroleum Co.'s No. 1 Meadows, SW cor. NW SE, Section 4-9-9, which came in about the first of June and actually gauged 2,868 bbls. in 24 hours, holding up to an average of 2,760 bbls. daily for the first week. It was drilled 5 feet in the sand topped at 3.321 feet. The same company's No. 3, a location north , was also a good well, making 2,200 bbls. To the south of this excellent forty acres, the Papoose Oil Co. also drilled in some good producers and in Section 3-9-9 the Kingwood Oil Co. was rewarded with an 80-bbl. well in its No. 4 Peters, NW cor. SW. There were good possibilities of extending the pool to the east.

At the end of June, the daily average production of the Papoose Pool was the highest that field ever attained, as 22 wells were making 7,405 bbls. During the week ended June 11, it reached 6,408 bbls. from 19 wells, due principally to the Berry Petroleum Co.'s gusher, but slumped to 3,819 bbls. before recovering.

Wewoka Field Area.

An important extension that may rejuvinate the Wewoka Field was effected during the last week of June by Louis Sykes and the Boggs Drilling Co. in their No. 1 Casey, NE cor. SE NE, Section 31-8-8. This well tanked 720 bbls. in the first 16 hours from sand at 3,171-78 feet. It declined to about 735 bbls. daily and about the middle of July was deepened 5 feet with the result that it came back to more than 1,000 bbls.

The field received several good producers in the six months, as well as numerous disappointments. The Gypsy Oil Co., early in January, extended the producing area to the north with its No. 1 Foster, C SW NW SW, Section 28-8-8, which was good for 1,000 bbls. from sand at 3,094-3, 108 feet.

On July 2, the Wewoka Field was producing 9,138 bbls. from 64 wells, which was the largest average production for any week since March 19 when it had only 42 wells. The low point came during the week ended May 7, when the production was only 6 326 bbls. daily, from 50 wells. The field began the year with about 12,000 bbls. from only 27 producers. Scouts look for the development of a new area to the west that may rival the output of the original field in Sections 32 and 33.

Decline at Burbank.

The great Burbank Field, which started the year with 69.936 bbls. from 1,113 wells, rose above the 100.000-bbl. mark twice during the six-month period, the first time shortly after the famous "gentlemen's agreement" which curtailed drilling effectively during the winter, was abrogated; and the second increase came ajust fter record-breaking Osage sale, although not a direct result of it. By the time the wells on the tracts purchased March 18 and 19 came in, the decline had set in so strongly that the small wells could not offset it.

The peak of production in the Burbank Field for the six months was registered during the week ended April 9 when 1.328 wells produced a daily average of 111.863 bbls. The low mark was made during the week ended May 21, when the daily average was 84.470 bbls. from 1,397 producers. On July 2,

(Continued on Page 153)

FEVERISH LEASING AND WILDCAT PLAY FEATURED KANSAS FIELDS

By C. D. Lockwood.

An almost unprecedented wildcatting campaign was the outstanding feature of the first six months of 1924 in the Kansas Fields, with the western counties playing the major role due to the inspiration of the famous Russell County discovery late in 1923, and to the additionel discovery of oil in Rice County about the middle of February. The leasing campaign that reached its peak shortly after the advent of spring covered almost every foot of acreage between Hutchinson and Russell and extended westward irregularly to the Colorado boundary, and northward practically to the Nebraska line. About 80 tests in this vast region were in all stages from rigs on the ground to depths nearing the important levels, but none except in Russell County had attained the necessary footage to prove anything conclusively.

Russell, Rice, Cowley, Greenwood, Chautauqua and Montgomery counties, shared the honors that go with the most important developments of the six months. Russell County should head the list because about June 8 the west offset to the M. M. Valerius Oil & Gas Co.'s discovery well in the SW cor. SE, Section 8-12-15W, came in and proved beyond a doubt that the real oil field had been discovered. Running about 10 feet higher than the discovery, the second well topped the sandy lime at 2,990 feet and when penetrated 10 feet, it swabbed 750 bbls. in a 24-hour test. About a week later, Stearns & Streeter and the Derby Oil Co. drilled in their No. 1 Oswald, a quarter of a mile west of the second well in the pool, topping the oil formation at 2,947 feet. With the bit one foot deeper, it flower 22 bbls. an hour and swabbed on the beam at the rate of 35 bbls. hourly. It was averaging 785 bbls. daily during June. The south offset to the discovery was the next well in, the M. M. Valerius Oil & Gas Co.'s No. 1 Munsell, and it swabbed 125 bbls. in a 12-hour test from pay at 2.998-3 038 feet. It pumped irregularly about 135 bbls. daily but had trouble with tubing. The Sinclair Pipe Line Co.'s line was crowded and the wells were not pumped or swabbed at their capacity.

Rice County Activity.

Rice County was the center of much attention by operators when Hipple & Childs struck a showing of oil in their No. 1 Welch, SE cor. SW NW, Section 35-20-6W, at 3.370 feet. The well was drilled down to 3.405 feet and when put on the pump about March 10, made 140 bbls. the first 24 hours and 115 bbls. on the fourth day. During June, it averaged 77 bbls. daily. The Prairie Oil & Gas Co. purchased the well and 1,700 acres checkerboarded around it for a reported consideration of $135,000. A test which they were drilling jointly with the Hipple & Childs interests in the NE cor. NW SW, Section 35-20-6W, was down 2,800 feet on July 5.

Cowley County claimed attention on several counts. The Eastman Pool in Section 5-31-6 and adjacent sections, produced some good wells, one of the best of which was the Empire Gas & Fuel Co.'s No. 2 Eastman, C NE SE, Section 6-31-6, which came in about June 10 for 738 bbls. and 6,000,000 feet of gas in sand at 2,824-34 feet. The Southwestern Petroleum Co.'s No. 3 Eastman, CNL

(Continued on Page 148)

IDEAL

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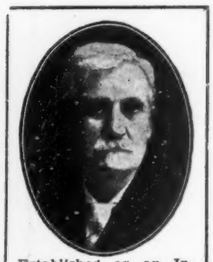

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ONE CRITIC OF THE INDUSTRY

To the Editor of the Oil and Gas Journal:

Your publication and several others devoted to the oil industry have been urging the petroleum interests of the country to "tell the story of petroleum to the public." Presumably this advice is intended ultimately to correct the evils that have beset the business for a year or more, and for which, also presumably, the public is to blame.

Is the public to blame for the overproduction of petroleum, for the enormous stocks of crude oil and refined products, especially gasoline?

Is the public to blame for all the misrepresentation that has been made about an "impending oil famine," that we have heard so much about from time to time for the last ten years, and that never yet has even been approached?

Is the public to blame for the optimistic statements made by President W. C. Teagle of the Standard Oil Co. of New Jersey; by Harry F. Sinclair, and other leading lights in the business when facts easily obtainable at the time such statements were made could not by any stretch of the imagination be construed with optimism?

Is the public to blame for the purely artificial crude oil market maintained by the Prairie Oil & Gas Co. last summer and fall, and again this year, to protect the securities of one of the big speculators in crude?

Is the public to blame for the fictitious gasoline market maintained by the Standard Oil Company of Indiana, on the ground that crude oil was high (purposely kept high), notwithstanding that other companies outside of the Indiana company's affiliations were able to buy all the supplies they required at considerably less than the "posted" price?

Is the public to blame for increases as high as 100 per cent in the price of crude oil early this year, when day after day, and month after month, statistics showed we were storing hundreds of thousands of barrels a day of oil products of all kinds—crude, gasoline, kerosene, lubricating oil, gas and fuel oils, etc.?

Is the public to blame for leading the producers, by sharp and wholly unjustified advances in price, to "drill their heads off" and contribute still further to the tremendous overproduction?

Why tell the public the benefits of cracking processes and the great amount of money saved each year because of the greater output of gasoline resulting from their operation? Isn't the adoption of the cracking process of equal advantage to the refiner?

Why tell the public that the oil industry has given such a wide market to the products of Mr. Ford and other automobile manufacturers? Hasn't Mr. Ford and his fellow manufacturers given a wide market to the oil men?

The oil business is demoralized—if the really legitimate oil business of the country is demoralized—because of "boring from within," because a few powerful interests apparently to serve their own selfish ends would destroy any one or anything that stood in their path.

Yes, there is a great chance for publicity, if you want to tell the real story, but do the men behind this so-called publicity movement feel they are going to help the business any by a campaign of cheap cackling about minor and irrevelevant details, while the oil market makers and breakers and their financial allies continue to manipulate fundamental conditions?

The housecleaning needed by the petroleum industry is an inside job. Let it be done quickly, quietly and effectively. And when the house is in order, invite the public to take a look.

D. J. M'AULIFFE.

New York, July 21, 1924.

The letter from D. J. McAuliffe, of New York, will be of interest to oil men because it is a fair sample of the criticism directed against the industry based upon predisposition rather than evidence.

Mr. McAuliffe blames the industry for overproduction of petroleum and for the enormous stocks of crude and refined products, especially gasoline. He might as well indict the farmers for overproduction of wheat.

He accuses the industry of misrepresentation about an impending oil famine that has not been realized. If the industry had been restricting production and creating an artificial scarcity to bolster predictions of famine he might have a case but what sense or purpose could there be in predicting famine and piling up record breaking production?

He blames leaders of the industry for optimistic statements but if these leaders were mistaken so was every man in the oil business whose experience qualified him to form an opinion. That these leaders were mistaken is surely the best proof against his supposition of a manipulated industry. The facts which he declares to have been easily obtainable (after the event presumably) were beyond human knowledge when the optimistic estimates were made.

The charge that a purely artificial crude market was maintained last summer and fall is mere opinion in the absence of any standard of crude price outside of that supplied by supply and demand. What one buyer might consider purely artificial might be to the seller too low to justify continuing in the business of production.

The fictitious gasoline market which Mr. McAuliffe assumes was maintained because crude was purposely high is imaginary for the same reason. If the crude price was reasonable then the gasoline price must have been so also.

The assertion that outside companies were able to buy below the posted price was not true of any of the great companies, Standard or non-Standard. It was true of some smaller independents, as it always is when "distress" crude or gasoline is thrown on the market by the financial necessities of a few individuals here and there. It in no way reflects actual conditions affecting the industry as a whole.

The increased prices for crude early this year were the natural effect of the general feeling within the industry that production would not approach the record of last year while the ordinary increase in consumption would call for a larger supply of crude than was hoped to be found.

The enormous stocks at the beginning of this year, of which Mr. McAuliffe speaks, were less in proportion to estimated consumption than the average stocks had been for 15 years.

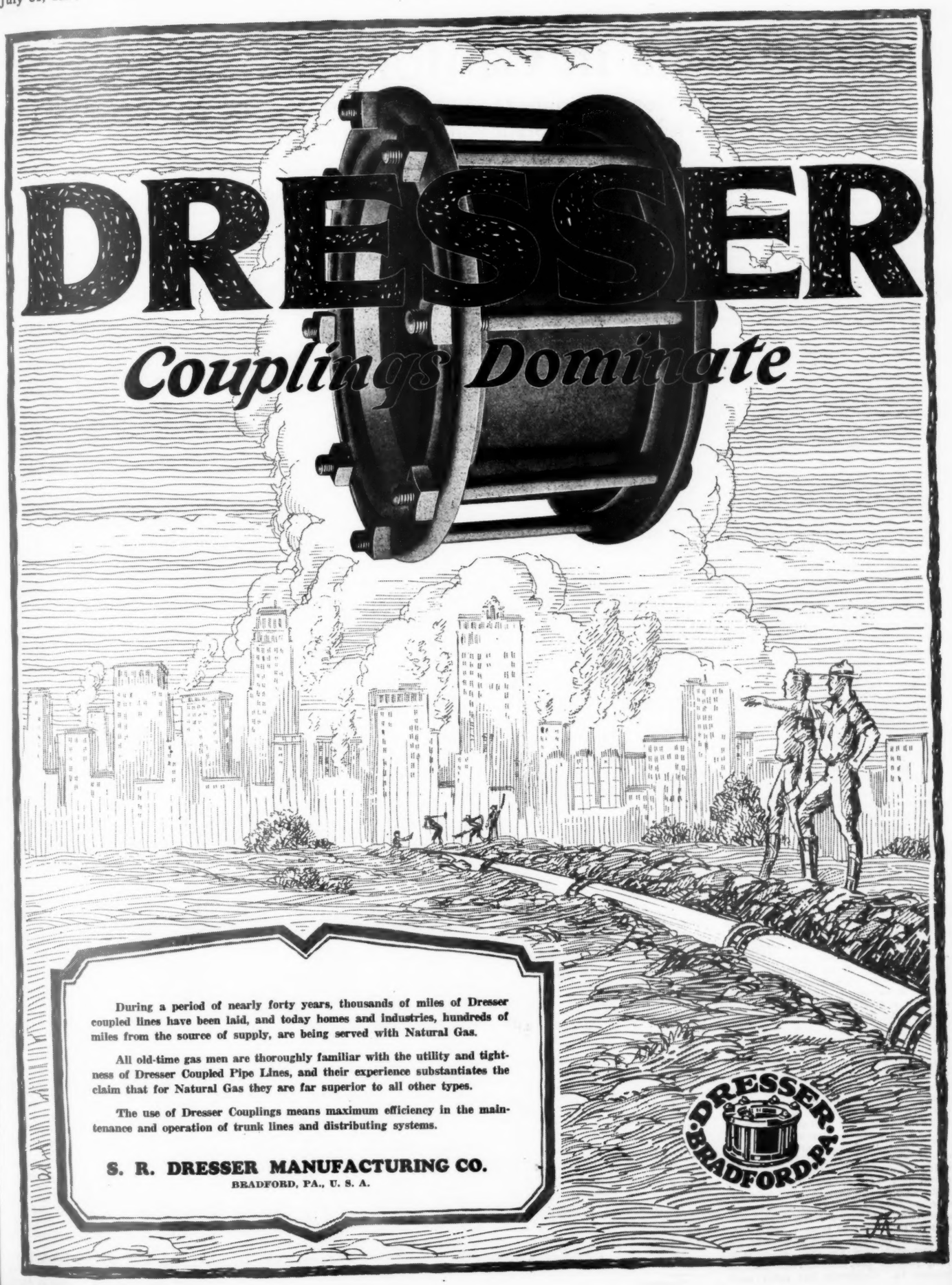
There was every probability that we should need every barrel of oil that could be produced. Prices naturally rose, encouraging producers to "drill their heads off." But can anybody be blamed for that?

Certainly not, any more than can anyone be blamed for the most unseasonable spring on record ,and a slackening of general business disappointing all hopes of gasoline consumption and backing up stocks in storage.

Mr. McAuliffe, apparently following his idea that overproduction of petroleum and gasoline is a conspiracy against the public, finds fault with the refiners using the cracking process to increase the supply of gasoline, because the refiners get an advantage from the improved method. To increase the supply of gasoline by the cracking process to a staggering superabundance that forces prices below cost is certainly a curious sort of conspiracy.

His observation about the respective credit between Mr. Ford and the oil industry is simply another version of the query whether the hen or the egg came first.

The rest of Mr. McAuliffe's communication does not even ask questions. It merely makes assertions. And the manner of making these assertions so clearly exposes the predisposition of the author's mind as to bias his entire letter. Nevertheless The Oil and Gas Journal has endeavored frankly and plainly to give him the information he has asked while recognizing that because the facts will upset his conceptions he may be indisposed to listen to them.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Conditions in California Improving

Production of Crude Declining and 1924 Looks Like Banner Year From Standpoint of Marketing Companies

By L. P. Stockman

The first six months of the current year saw a big improvement in the chaotic conditions which had existed in California during the greater part of 1923. The simultaneous development of Santa Fe Springs and Long Beach resulted in an abnormal condition which taxed the resources of the pipe line companies to the utmost, especially during the latter part of the year. With the advent of 1924, however, conditions began to show a marked improvement and, with a much smaller amount of drilling being done and the production in the flush pools decreasing, things are beginning to look bright.

From the standpoint of the marketing companies, 1924 looks like a banner year. Practically all the major California companies have expanded by increasing their production, storage and marketing facilities. The heavy write-offs for expansion and development work during 1923 resulted in smaller net earnings for that period but the stocks of crude and refined oils accumulated are being reflected in larger earnings during the current year to date.

During 1923, crude and refined oils suffered severe cuts. Light crude dropped from $1.95 per barrel to 76 cents, while gasoline was reduced from 20 cents per gallon to 13 cents. On January 22, 1924, all grades of crude were advanced 25 cents per barrel, bringing the price paid at the well for light oil to $1.01. At the same time gasoline was boosted 2 cents per gallon to retail at 17 cents in Los Angeles and 18 cents in San Francisco, including the State tax of 2 cents per gallon. On February 5 heavy crude was again increased and light crude was advanced from $1.01 per barrel to $1.40. The following day, February 6, gasoline was raised 2 cents per gallon and this last advance, together with the State tax of 2 cents effective October 1, 1923, brought the service station price to 19 cents in Los Angeles and 20 cents in San Francisco.

No More Changes Expected

Because of the large amount of crude, tops and refined oils on hand, no immediate beneficial change is anticipated in present prices. It is believed that Long Beach, Torrance, Dominguez and Rosecrans control the destines of the industry during the next 12 months and their status will probably govern prices during this time. Long Beach and Torrance are scheduled for drops but Dominguez and Rosecrans are still in their infancy. Nothing is known of the latter field because of the limited amount of work done to date andw hile its output will undoubtedly not be felt to any extent until next year it may be developed quickly. If the field lies between the Union Oil Co.'s No. 1 Athens and No. 1 Rosecrans, a little over a mile south, it will be developed sanely because most of the acreage is held by large blocks. If it extends north of the former, however, independent operators may have an opportunity to stage another orgy of town lot drilling. Most of the larger companies believe the field lies between No. 1 Athens and No. 1 Rosecrans and for this reason the field may not have as serious an effect on State production as some are inclined to believe.

Conditions Improved

Taken as a whole, conditions at present are exceedingly better than those existing at the beginning of the year and recent developments indicate the industry will recover quite rapidly. The only disquieting feature at present is the large amount of wildcatting being done. Percentage plays just as large a part in the petroleum industry as it does with the gaming table and for this reason it is quite possible that another field may be brought in. California has many pools only waiting to be tapped and, while it may prove more difficult in the future, because it will be necessary to prospect hidden structures to discover new fields, there is no question but that the industry will grow and expand.

Notwithstanding the fact that the discovery of a new field might mean another year or two of low prices and heavy production, practically all of the larger companies are doing more or less prospecting. Wells are being punched down from one end of the State to the other, some locations being favorable and others geologically impossible. The past month, June, showed the smallest daily average production of any month since February, 1923. A total of 18,807,999 bbls., or an average of 626,933 bbls. daily was produced, as compared with 629,793 bbls. per day during May. The total output for the first six months was 118,,108,412 bbls., an average of 648,947 bbls. daily, as compared with 648,568 bbls. during the first half of last year. During the six months period just closed, the output at Long Beach has averaged 189,280 bbls. daily, the highest production, 219,013 bbls., being recorded during February and the lowest, 159,512 bbls. occuring during June. Santa Fe Springs averaged 88,957 bbls. during the first six months and Huntington Beach 54,308 bbls. Torrance contributed 44,425 bbls. daily, while Dominguez shows 5,423 bbls Midway-Sunset produced 17,854,712 bbls during the first half of the current year, which was the equivalent of 98,103 bbls. per day.

Wells Opened Up

Elk Hills and Coalinga, with the exception of Torrance, showed the largest increase in production of any field. The gain at Torrance was, of course, due to new development work but the change in Elk Hills and Coalinga was attributable to the opening up of many wells shut down during the flush production in southern California. Torrance increased from a daily average production during January of 31,363 bbls. to 57,229 bbls. during June. The output at Elk Hills during January averaged 22,406 bbls., as compared with 38,909 bbls. in June. During the same period Coalinga jumped from 17,605 bbls. to 32,869 bbls. Santa Fe Springs registered the biggest drop, decreasing from 138,006 bbls. daily during January to 61,049 bbls. during June. Long Beach showed a loss of 59,134 bbls. daily, dropping from 218,646 bbls. during the first month to 159,512 bbls. in June. Huntington Beach with a total output during January of 1,986,723 bbls. declined from 64,088 bbls. daily to 46,073 bbls.

Stocks Increased

Consumption and shipments have shown a wide fluctuation during the first six months, due, no doubt, to variations in the amount of oil exported and shipped to the Atlantic Seaboard. The total consumption, including tanker shipments during the first half of the year was 109,455,710 bbls., or a daily average of 601,405 bbls. The surplus accumulated of 8,652,702 bbls., resulted in the State stocks mounting from 91,925,153 bbls. on hand at the beginning of the year to 100,577,855 bbls. at the close of June. The surplus of 8,652,702 bbls. consisted of 4,020,527 bbls. of residuum and fuel oil, 1,851,123 bbls. of light oil and 442,372 bbls. of tops. On January 1 there were 45,059,528 bbls. of residuum and heavy oil, 35,572,180 bbls. of light crude and 13,623,125 bbls. of tops on hand, as compared with 49,080,055 bbls. of residuum and heavy grade, 37,423,303 bbls. of light crude and 14,065,497 bbls. of tops at the close of business June 30. On January 1, 1923, there were on hand 40,857,761 bbls. of residuum and heavy crude, 17,613,591 bbls. of light crude and 2,912,812 bbls. of tops. The increase between January 1, 1923 and June 30, 1924, was therefore 39,193,891 bbls. This surplus was made up of 8,222,294 bbls. of residuum and heavy crude, 19,818,712 bbls. of light crude and 11,152,685 bbls. of tops.

A check of development work shows that there were more wells drilling during February and more rigs erected in Janu-

(Continued on Page 134)

CALIFORNIA
Production of Gasoline by Months
(Unit of Gallons)

Month—	1924 Total Gallons	1924 Daily Average	1923 Total Gallons	1923 Daily Average	1922 Total Gallons	1922 Daily Average
January	115,330,234	3,720,330	92,686,090	2,989,874	44,790,331	1,444,849
February	112,082,190	3,864,903	92,852,538	3,316,162	43,806,932	1,564,533
March	126,043,182	4,346,317	104,402,122	3,367,810	49,141,955	1,585,224
April	120,364,468	4,012,149	102,428,548	3,414,285	50,991,900	1,699,730
May	122,345,924	3,946,643	112,314,674	3,623,054	52,468,152	1,692,521
June	116,779,487	3,892,649	115,316,719	3,843,891	54,961,369	1,832,046
July	.....	.....	121,212,438	3,910,079	59,063,530	1,905,275
August	.....	.....	109,165,919	3,521,481	67,817,696	2,187,668
September	.....	.....	103,618,605	3,453,954	70,139,443	2,337,981
October	.....	.....	119,134,600	3,843,052	65,873,412	2,124,949
November	.....	.....	106,195,727	3,539,858	64,586,228	2,152,874
December	.....	.....	103,872,185	3,350,716	69,856,800	2,253,446
Total	712,945,485	3,917,283	1,283,200,165	3,515,617	693,497,748	1,899,994

Shipments and Consumption of Gasoline by Months
(Unit of Gallons)

Month—	1924 Total Gallons	1924 Daily Average	1923 Total Gallons	1923 Daily Average	1922 Total Gallons	1922 Daily Average
January	99,626,326	3,213,752	75,618,930	2,439,320	36,645,242	1,182,104
February	89,575,187	3,088,800	88,606,548	3,164,484	36,363,803	1,298,707
March	104,083,791	3,357,542	86,152,824	2,779,123	50,669,498	1,634,500
April	109,338,576	3,661,286	103,802,851	3,460,095	48,869,154	1,628,972
May	112,778,310	3,638,010	101,873,191	3,286,232	61,915,087	1,997,261
June	105,647,148	3,521,571	119,582,787	3,986,093	62,914,339	2,097,145
July	.....	.....	127,486,676	4,112,472	65,584,330	2,115,624
August	.....	.....	92,146,469	2,972,467	65,562,730	2,114,927
September	.....	.....	113,124,583	3,770,819	60,680,952	2,022,698
October	.....	.....	104,792,275	3,380,396	50,320,008	1,623,226
November	.....	.....	90,185,159	2,006,172	50,510,426	1,683,681
December	.....	.....	86,543,829	2,791,736	53,753,805	1,733,994
Total	621,549,338	3,415,106	1,190,786,190	3,262,428	643,789,374	1,763,806

Stocks by Gasoline by Months
(Unit of Gallons)

Month—	1924 Total Stocks	1924 Monthly Surplus	1923 Total Stocks	1923 Monthly Surplus	1922 Total Stocks	1922 Monthly Surplus
January 1	191,780,375	.....	99,366,400	.....	49,658,026	.....
January 31	207,484,283	15,703,908	116,433,560	17,067,160	57,803,115	8,145,089
February 28	229,991,286	22,507,003	120,680,550	4,246,990	65,246,244	7,443,129
March 31	251,950,677	21,959,391	138,058,780	17,378,230	63,718,701	*1,527,543
April 30	262,476,569	10,525,892	136,684,477	*1,374,303	65,841,447	2,122,746
May 31	272,044,183	9,567,614	147,125,960	10,441,483	56,394,512	*9,446,935
June 30	283,176,522	11,132,339	142,859,862	*4,266,108	48,441,542	*7,952,970
July 31	.....	.....	136,585,654	*6,274,208	41,920,742	*6,520,800
August 31	.....	.....	153,605,104	17,019,450	44,175,708	2,254,966
September 30	.....	.....	144,099,126	*9,505,978	53,634,199	9,458,491
October 31	.....	.....	158,441,451	14,342,325	69,187,603	15,553,404
November 30	.....	.....	174,452,019	16,010,568	83,263,405	14,075,802
December 31	.....	.....	191,780,376	17,328,356	99,366,400	16,102,995
Total	.....	91,396,147	.....	92,413,975	.....	49,708,374

*Decrease.

Production of Kerosene by Months
(Unit of Gallons)

Month—	1924 Total Gallons	1924 Daily Average	1923 Total Gallons	1923 Daily Average	1922 Total Gallons	1922 Daily Average
January	24,877,077	802,486	16,753,990	508,387	17,211,218	555,201
February	23,387,949	835,284	17,712,987	632,607	17,478,297	624,225
March	20,917,092	674,745	18,405,327	593,720	15,750,676	508,086
April	23,930,144	797,671	18,359,965	611,999	14,722,826	490,761
May	24,026,326	775,043	20,519,907	661,932	18,931,766	610,702
June	20,108,017	670,267	17,998,275	599,943	17,713,315	590,444
July	.....	.....	16,255,670	525,344	15,313,484	493,983
August	.....	.....	16,399,772	529,025	14,445,615	465,988
September	.....	.....	17,296,553	576,552	16,431,183	547,706
October	.....	.....	15,468,701	498,990	14,932,890	481,706
November	.....	.....	17,941,590	598,053	18,012,792	600,426
December	.....	.....	23,991,576	773,922	14,347,967	462,838
Total	137,246,605	754,102	216,140,319	592,165	195,292,029	535,047

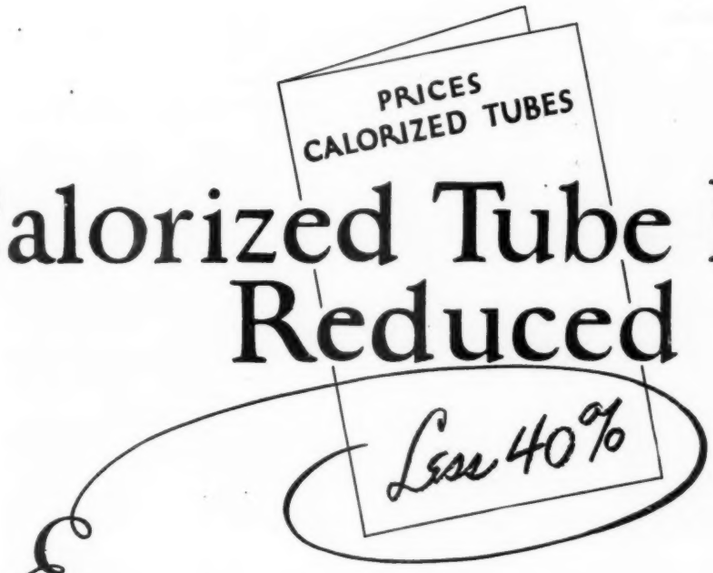
Consumption and Shipments of Kerosene by Months
(Unit of Gallons)

Month—	1924 Total Gallons	1924 Daily Average	1923 Total Gallons	1923 Daily Average	1922 Total Gallons	1922 Daily Average
January	26,767,633	863,472	25,008,328	806,720	15,191,418	490,046
February	19,372,047	691,859	15,898,802	567,814	16,777,098	599,182
March	12,289,063	396,422	20,527,683	662,183	20,869,690	673,216
April	30,458,089	1,015,270	13,378,980	445,966	14,464,545	482,152
May	20,051,493	646,822	20,623,245	665,266	16,525,034	533,066
June	26,114,711	870,490	20,018,536	667,285	11,286,092	376,203
July	.....	.....	9,768,028	315,098	18,776,818	605,704
August	.....	.....	20,560,453	663,240	13,679,116	409,804
September	.....	.....	12,868,541	428,951	13,193,406	429,780
October	.....	.....	18,306,447	590,498	19,934,240	643,040
November	.....	.....	18,830,622	627,687	19,561,983	652,066
December	.....	.....	17,742,217	572,330	9,483,703	305,926
Total	135,053,041	742,050	213,530,883	585,016	189,743,143	519,844

Stocks of Kerosene by Months
(Unit of Gallons)

Month—	1924 Total Stocks	1924 Monthly Surplus	1923 Total Stocks	1923 Monthly Surplus	1922 Total Stocks	1922 Monthly Surplus
January 1	30,227,403	.....	27,617,967	.....	22,069,081	.....
January 31	28,336,847	*1,890,556	18,369,629	*9,248,338	24,088,881	2,019,800
February 28	32,352,749	4,015,902	20,183,814	1,814,185	24,790,080	701,199
March 31	40,980,773	8,628,024	18,061,458	*2,122,356	19,671,066	*5,119,014
April 30	34,452,828	*6,527,945	23,042,443	4,980,985	19,929,347	258,281
May 31	38,427,661	3,974,833	22,939,105	*103,338	22,336,079	2,406,732
June 30	32,420,967	*6,006,694	20,918,844	*2,020,261	28,763,302	6,427,223
July 31	.....	.....	27,436,485	6,517,641	25,299,968	*3,463,334
August 31	.....	.....	23,276,804	*4,160,681	26,066,467	766,499
September 30	.....	.....	27,703,822	4,428,018	29,304,244	3,237,777
October 31	.....	.....	24,867,076	*2,836,746	24,302,894	*5,001,350
November 30	.....	.....	23,978,044	*889,032	22,753,703	*1,549,191
December 31	.....	.....	30,227,403	6,249,359	27,617,967	4,864,264
Total	.....	2,193,564	.....	2,609,436	.....	5,548,886

*Decrease.



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California's Record First Half of Year

Prepared By L. P. Stockman

Summary of California Field Operations
First 6 Months of 1924

1924—	Total New Rigs	Total Wells Comp.	Total Initial Prod.	Total Holes Abd.	Average Wells Prod.	Average Wells Drilling
January	149	120	56,239	48	9,801	586
February	81	102	44,471	57	10,283	593
March	137	131	62,771	105	10,549	553
April	118	97	37,937	25	10,326	556
May	112	150	56,451	32	10,900	514
June	129	88	32,209	38	11,662	549
First half year 1924	726	688	290,078	305	10,570	3,559
First half year 1923	719	387	644,368	122	8,986	783
First half year 1922	593	321	130,442	86	9,816	584
First half year 1921	661	365	112,210	78	9,749	557
First half year 1920	430	254	47,168	97	9,159	369

Production of Crude by Districts, January to June 1924

District—	Production of crude— January	February	March	April	May	June	Total	Daily
Kern River	589,963	552,304	571,439	577,977	572,828	560,788	3,425,299	18,820
McKittrick	176,253	169,669	179,156	174,583	172,731	169,422	1,041,814	5,724
Midway-Sunset	2,622,975	2,760,183	3,016,701	2,974,103	3,233,550	3,247,200	17,854,712	98,103
Elk Hills	694,588	1,071,306	1,189,088	1,100,926	1,142,576	1,167,261	6,365,745	34,977
Lost Hills-Belridge	106,814	101,562	109,216	97,588	101,484	140,710	657,374	3,612
Coalinga	545,750	630,695	950,464	1,115,243	1,116,939	986,064	5,345,155	29,370
Wheeler Rdg.	23,254	25,931	28,734	26,777	25,150	31,288	161,134	885
Watsonville	1,783	1,667	1,782	1,725	1,782	1,725	10,464	57
Santa Maria	254,546	230,927	244,924	242,644	223,421	236,066	1,432,528	7,871
Summerland	4,511	4,220	4,508	4,365	4,513	4,365	26,482	146
Ventura-Newhall	282,854	284,143	306,323	334,702	340,319	321,090	1,869,431	10,271
Los Angeles Salt Lake	97,081	84,483	80,297	71,045	76,652	80,749	490,307	2,694
Whittier	63,261	58,564	62,266	59,217	64,768	61,899	369,975	2,033
Fullerton	303,647	314,934	323,285	321,848	379,170	351,335	1,994,219	10,957
Coyote	129,490	117,872	117,635	459,738	583,235	564,901	1,972,871	10,840
Santa Fe Springs	4,278,179	3,066,520	2,682,741	2,181,404	2,149,880	1,831,457	16,190,181	88,957
Montebello	529,013	537,732	522,312	498,729	519,101	501,524	3,108,411	17,079
Richfield	414,666	399,788	397,265	380,172	378,322	358,474	2,328,688	12,795
Huntington Beach	1,986,723	1,735,201	1,733,090	1,540,845	1,506,100	1,382,184	9,884,143	54,308
Long Beach	6,778,037	6,351,371	6,104,570	5,275,313	5,172,472	4,785,362	34,467,125	189,380
Torrance	872,261	800,311	1,168,181	1,644,023	1,783,670	1,716,885	8,085,331	44,425
Dominguez	56,851	41,843	119,285	216,881	266,112	286,025	986,997	5,423
Rosecrans	.....	.....	.....	.....	18,801	21,225	40,026	220
Total	20,912,500	19,341,226	19,913,262	19,299,849	19,833,576	18,807,999	118,108,412	648,947

Average Daily Production of Crude by Districts, January to June, 1917 to 1924, Inclusive

Districts—	1924	1923	1922	1921	1920	1919	1918	1917
Kern River	18,820	20,151	20,150	21,048	20,841	21,268	22,617	24,058
McKittrick	5,724	6,008	6,821	6,812	7,247	7,997	8,323	9,303
Midway-Sunset	98,103	78,103	84,130	86,156	84,609	89,302	98,028	101,744
Elk Hills	34,977	22,502	37,173	56,136	7,121	601	.....	.....
Lost Hills-Belridge	3,612	6,458	8,580	10,943	11,602	13,319	15,694	16,717
Coalinga	29,370	13,630	33,254	41,038	43,263	45,367	45,552	43,558
Wheeler Ridge	885	218	.....	.....	.....	.....	.....	.....
Watsonville	57	58	51	51	50	50	50	50
Santa Maria	7,871	8,525	12,387	16,309	15,802	17,365	20,417	13,842
Summerland	146	144	114	98	98	99	99	104
Ventura-Newhall	10,271	10,347	7,241	5,867	5,459	4,751	3,407	3,023
Los Angeles-Salt Lake	2,694	3,309	3,454	3,532	3,759	3,629	3,740	4,178
Whittier	2,033	1,808	2,052	2,091	2,397	2,772	3,031	3,028
Fullerton	10,957	11,200	14,274	16,877	13,030	11,872	11,862	12,374
Coyote	10,840	11,217	20,111	20,814	24,718	29,721	32,461	29,837
Santa Fe Springs	88,957	172,117	7,044	.....	.....	.....	.....	.....
Montebello	17,079	11,802	20,742	25,663	31,471	32,291	13,337	500
Richfield	12,795	17,942	24,729	18,337	4,417	831	.....	.....
Huntington Beach	54,308	101,027	20,416	3,467	.....	.....	.....	.....
Long Beach	189,380	148,659	14,735	.....	.....	.....	.....	.....
Torrance	44,425	3,343	72	.....	.....	.....	.....	.....
Dominguez	5,423	.....	.....	.....	.....	.....	.....	.....
Rosecrance	220	.....	.....	.....	.....	.....	.....	.....
Total	648,947	648,568	337,529	334,229	275,884	281,235	278,618	262,376

Production of Crude by Months—California Oil Districts
(Barrels of 42 U. S. Gallons)

	1924 Total Barrels	1924 Daily Average	1923 Total Barrels	1923 Daily Average	1922 Total Barrels	1922 Daily Average
January	20,912,500	674,597	16,457,445	530,885	9,717,632	313,472
February	19,341,226	690,758	16,426,759	586,670	9,060,383	323,585
March	19,913,262	642,363	19,608,192	632,522	10,250,547	330,663
April	19,299,849	643,328	20,695,959	689,865	10,186,081	339,536
May	19,833,576	639,793	21,535,365	694,689	11,156,193	359,554
June	18,807,999	626,933	22,667,106	755,570	10,731,942	357,731
July	.....	.....	25,262,082	814,906	11,598,291	374,138
August	.....	.....	26,440,605	852,903	11,848,882	382,221
September	.....	.....	25,762,487	858,750	12,205,146	406,838
October	.....	.....	24,576,400	792,787	13,419,422	432,885
November	.....	.....	22,397,848	746,595	14,035,537	467,851
December	.....	.....	21,899,247	706,427	15,426,810	497,639
Total	118,108,412	648,947	263,728,895	722,545	139,626,876	382,539

Consumption and Shipments of California Petroleum
(Barrels of 42 U. S. Gallons)

	1924 Total Barrels	1924 Daily Average	1923 Total Barrels	1923 Daily Average	1922 Total Barrels	1922 Daily Average
January	18,582,820	599,446	15,009,199	484,168	8,478,468	273,499
February	18,135,554	647,698	13,742,927	490,819	8,511,355	303,977
March	18,707,048	603,453	17,846,282	575,687	8,833,220	284,942
April	18,630,917	621,031	18,323,928	610,798	8,144,626	271,487
May	17,657,290	569,590	21,016,650	677,956	8,910,856	287,447
June	17,742,081	591,403	19,509,822	650,327	9,185,576	306,186
July	.....	.....	19,286,111	622,133	9,863,189	318,167
August	.....	.....	20,548,137	662,843	9,268,978	298,999
September	.....	.....	23,354,241	778,475	10,218,039	340,601
October	.....	.....	21,287,900	686,706	12,106,901	390,609
November	.....	.....	21,207,472	706,916	11,856,645	395,021
December	.....	.....	22,055,237	711,459	13,797,370	445,076
Total	109,455,710	601,405	233,187,906	638,871	119,171,382	326,497

Range of California Field, Pipe Line, Tank Farm and Refinery Stocks
(Barrels of 42 U. S. Gallons)

On hand—	1924 Total Stocks	1924 Monthly Surplus	1923 Total Stocks	1923 Monthly Surplus	1922 Total Stocks	1922 Monthly Surplus
January 1	91,925,153	.....	61,384,164	.....	31,556,277	.....
January 31	94,254,833	2,329,680	62,832,410	1,448,246	32,795,441	1,239,164
February 28	95,460,505	1,205,672	65,516,242	2,683,832	33,344,469	549,028
March 31	96,666,719	1,206,214	67,278,152	1,761,910	34,761,736	1,417,267
April 30	97,335,651	668,932	69,650,183	2,372,031	36,803,192	2,041,456
May 31	99,511,927	2,176,286	70,168,898	518,715	39,038,529	2,235,337
June 30	100,577,855	1,065,918	73,326,182	3,157,284	40,584,895	1,546,366
July 31	.....	.....	79,302,153	5,975,971	42,319,997	1,735,102
August 31	.....	.....	85,194,021	5,891,868	54,272,194	2,579,901
September 30	.....	.....	87,602,267	2,408,246	56,259,301	1,987,107
October 31	.....	.....	90,890,767	3,288,500	57,569,832	1,310,531
November 30	.....	.....	92,081,143	1,190,376	59,754,724	2,184,892
December 31	.....	.....	91,925,153	*155,990	61,384,164	1,629,440
Total	8,652,702		30,540,989		20,456,594	

Note—Stocks previous to August 31, 1922, are those reported by the Independent Oil Producers Agency and are not directly comparable to the present stocks reported by the American Petroleum Institute which contain all crude, residuum and tops in the State. Previous figures show crude stocks only.
*Shortage.

CALIFORNIA CRUDE AND REFINED MARKET STATUS

(Continued from Page 23)

Before leaving th discussion of retail marketing in the Los Angeles district it is necessary to call attention to the peculiar condition existing in regard to so-called gasoline "bootlegging." There probably isn't another place in the country in which a very large gasoline consuming center is situated so very close to a large supply of natural gasoline produced by many small manufacturers with no marketing organizations. The result of this combination is that these gasoline manufacturers sell their product to small refiners at practically any price offered by the latter. These refiners then blend the natural gasoline with heavy naphtha and are in this way able to put on the market a Navy gasoline of good marketable quality at a price below that at which the big companies can make their gasoline from crude only. There isn't enough of the natural gasoline around so that the large companies could follow the example of the small ones and sell a blended product. Besides, all the big concerns are loaded up with finished refinery gasoline, tops, light crude, etc, which they are anxious to sell as soon as possible, not to mention going into the market to buy additional quantities of natural gasoline.

The net result of the bootlegging of gasoline in the Los Angeles and Long Beach districts is that one frequently finds service stations on competing 'corners, one belonging to some fly-by-night outfit and the othe representing a well-established company. The former station will be selling gasoline at anywhere from 13 to 17 cents per gallon, while the latter is trying to sell at the established market of 19 cents. (All of these prices include the State tax of 2 cents).

All this turmoil in the marketing of petroleum products on the Pacific Coast indicates a supply far in excess of the demand and quite naturally results in the weakening of the price structure. There is little doubt but that it will continue as long as California's crude production is larger than the amount which the normal Pacific Coast market can consume.

A Look Into the Future

Forecasting a market is always an unpleasant thing to do. No matter what the conclusion, whether it is going up or whether it is going down, the forecaster makes himself unpopular with somebody. It is further made unpleasant by the fact that it is well night impossibe to include all contributing factors in your analysis. You only have to leave out one of the important factors to ruin your result—your conclusion.

In this particular case it is impossible to reason the situation out to any very definite conclusion. At the present time the normal Pacific Coast market is consuming just about 450,000 barrels of oil per day. This is as predicted six months ago. California is now producing about 610,000 bbls per day and has about 20,000 barrels per day of shut-in production. There is no question about the decline in production continuing. However, there is considerable question as to the rate of decline. The rate has shown unmistakable evidence of slowing up. Probably at the end of six months, say January 1, 1925, California will be producing something in the neighborhood of 500,000 bbls per day with all wells opened up. This will not be for from the amount of oil which the Pacific Coast market can consume by then or about 465,000 to 470,000 barrels per day. Undoubtedly shipments to the Atlantic and Gulf Coasts will continue in fair volume. The conclusion therefore is that if these eastern shipments do not decline any faster than they have been for the last eight or nine months, the California industry will be drawing on storage oil somewhere around October.

The Present Situation.

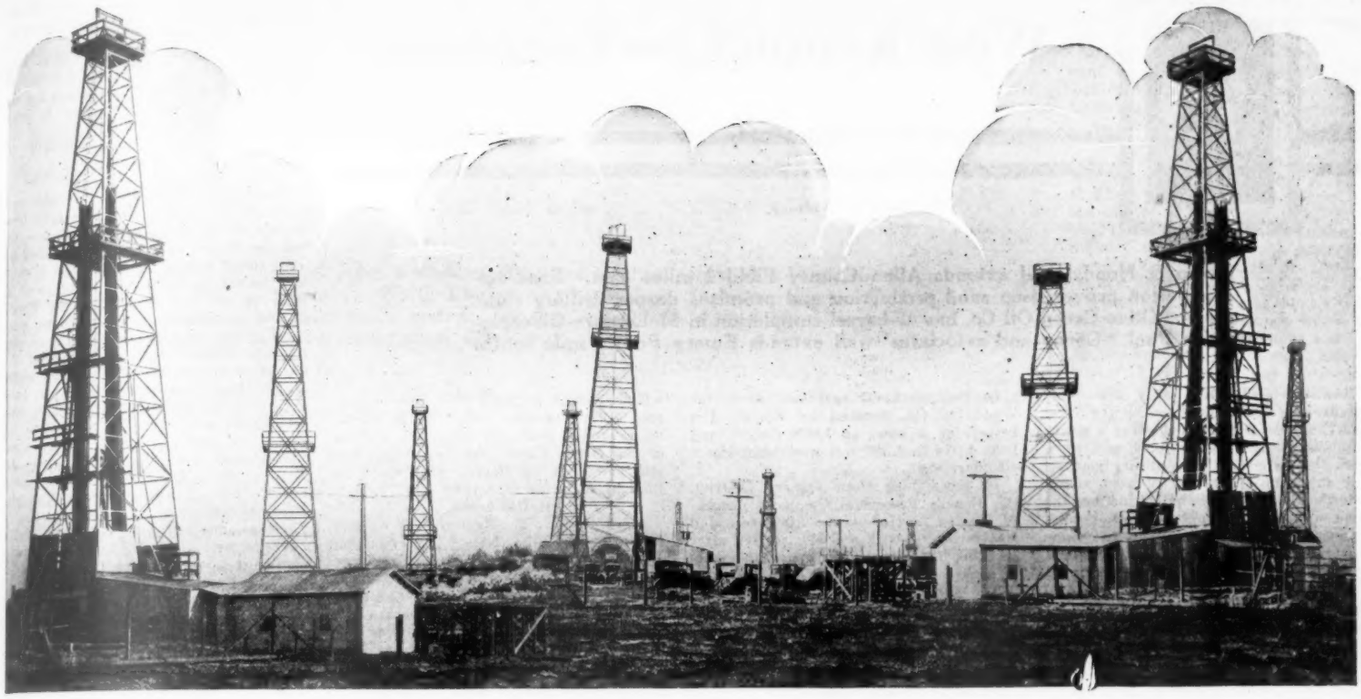
In predicting the rate of decline in production new fields must be kept in mind at all times. At present the situation in California lines up something like this: Torrance has reached its peak. Dominguez is owned practically in its entirety by the Union Oil Company of California and the Shell Company of California. These companies will naturally drill only as fast as they are obliged to by their lease requirements. This means that this field will be developed very gradually under present market conditions. Consequently no great and sudden flood of oil is to be expected from this source. Athens-on-the-Hill presents an entirely different picture. Nobody knows very much at present about the productive limits of this field. There are indications, however, that it will be a large field in area and in production. Most of the probable oil land in this area is held in small parcels, some of the most likely pieces being subdivided into town lots. Therefore we are likely to have a repetition of Huntington Beach and Santa Fe Springs. From the marketing viewpoint this does not need to create any great concern, however, because Athens-on-the-Hill will not be producing oil in sufficient quantities to upset calculations for another six months anyway and by that time California will already be drawing on stocks in considerable amounts. Athens may delay the recovery of the oil situation on the Coast, though. In fact, this is not only possible but probable.

So from the physical viewpoint we conclude that by fall of this year the California oil industry will be taking oil out of storage and thus pass the turning point in the cycle which began three years ago when supply began to exceed demand. At first thought it might be taken for granted that the financial side of the picture would start to improve at the same time. Further thought leads to the conclusion that this will depend almost entirely on what happens east of the Rockies. If the present business depression continues through the fall and winter there is small liklihood of oil prices turning upward. If prices east of the Rockies do not turn up but remain as they are the best which can be hoped for by California marketers is that present Pacific Coast price schedule be maintained. If eastern prices go down California prices will go down with them for the simple reason that California oil will have to move east through the Panama Canal until the consumption of the normal Pacific Coast Market is equal to the current production.

Question of Athens Field.

Assuming that Athens will be an average field as we figure averages now, say with a peak production of 175,000

(Continued on Page 142)



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established company. The former station ary 1, 1925, California will be produc- and Santa Fe Springs. From the

West Kentucky—Tennessee

By Vern T. Whitney.

Dixon & Hobdy well extends Allen County Field 2 miles east. Sandidge completion proves deep sand production and promises deeper drilling campaign. Olive Green Oil Co. has 45-barrel completion in McLemore-Gillespie-Price Pool. Gorby and associates' well extends Emery Pool a mile south.

Bowling Green, Ky., July 28.—With few exceptions the operators in the Western Kentucky Field are showing a marked disinclination to begin much new work until they are sure of a steady market.

A summary of the week's work shows a decrease of 219 bbls. in production, the same number of completions, one more producer, one less duster and the same number of gassers compared with last week's figures. The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Allen	6	5	77	1	0
Warren	4	4	70	0	0
Barren	4	4	37	0	0
Cumberland-Monroe	2	1	100	1	0
Metcalf	2	0	...	1	1
Green	1	1	4	0	0
Total	19	15	288	3	1
Last week	19	14	507	4	1
Difference	0	1	219	1	0

Allen County News.

The most important completion for the week in Allen County is the No. 1 Dr. Dixon, drilled by Dixon & Hobdy. This well, started off at better than 10 bbls., naturally from a sand encountered at around 300 feet and extended production 2 miles to the east of Butlersville, in the Mt. Aerial district of southwestern Allen.

In the Fisher Pool, 3 miles south of Scottsville, the Allen County Oil Co. finished its No. 9 Matle for 20 bbls. at 345 feet.

In the Trammel Creek district, 9 miles south of Scottsville, Fred Hartman's No. 6 Wheat made 15 bbls. naturally at 265 feet. This well was drilled to offset No. 1 Wheat, of Bastrus & Parsons which started off at 300 bbls. naturally, and which is still holding up, after two months pumping, at 50 bbls. daily, according to reports. In the same area, the Freelance Oil Co. completed No. 1 Leffingwell for 20 bbls. naturally at a total depth of 176 feet, 60 feet below the shale.

The Scatterfield Pool, west of Scottsville, on the Bowling Green Pike, came to life with a well on the Goodrum lease, operated by Blair & West, which started off at 12 bbls. naturally in the second sand below the shale. Wells in this pool, which was opened early in 1922, are holding up in good shape making from 2 to 7 bbls. settled production.

Parks & Co.'s No. 12 Susan Moore, discovery lease of the Gainesville Pool, was drilled from 367 feet to 528 feet without results and was abandoned.

The recent completion on the Walker lease, of C. H. Andrus, which started off at 380 bbls. naturally is holding up to the 150 bbl. mark. It is producing from the shallow depth of 347 feet, two feet in the sand.

Warren County Wells.

Warren County had four completions for the week, all producers. The most important was the Cadet Oil & Gas Co.'s No. 21 Biddle in the Sandridge district, which is making 15 bbls. at a total depth of 1,162 feet. Shale was found from 926 to 1,020 feet. Two sands were encountered, the first from 1,081 to 1,087 and the second from 1,124 to 1,142 feet. Each pay was shot with 80 quarts. This is an important well as it proves that the deep sand below the shale is productive in this district and may mean the drilling deeper of a large number of shallow producers.

In the northeast extension area, the Wood Oil Co. finished its No. 13 Jim Isabel for 5 bbls. at 1,090 feet. Sand from 1,074 to 1,083 feet was treated to a 40 quart shot.

In the White Stone Quarry District, the Beaver Petroleum Company deepened its No. 2 Hudson to 1,067 feet and was rewarded with a 5 bbl. starter after shooting 12 feet of sand with 30 quarts of nitro.

The Olive Green Oil Company drilled its No. 1 McLemore, in the McLemore-Gillespie-Price Pool, from the shallow sand to the deep pay below the shale where it started off making 45 bbls. Shale was from 946 to 1,016 feet. The sand from 1,067 to 1,076 feet, the total depth, was shot with 60 quarts.

Barren County Dope.

Four completions for the week, all producers, increasing the production of the Barren County Field, 37 bbls., shows a steady increase of oil production in that territory.

The most important completion was that of Gorby and associates on the Taylor lease, several miles southwest of Glasgow. This well extends production in the Emery-Moore Pool, 1 mile to the south. It was completed at a total depth of 450 feet, and when put on the beam and pumped it made 11 bbls. Fourteen feet of pay was shot with 30 quarts. Casing was set at 160 feet.

In the Emery-Moore Pool proper Ziegler Brothers got a 10-bbl starter in their No. 4 Fee, after a 30 quart shot at 533 feet. Casing was set at 140 feet, Norris Brothers, Warder & Samson finished a 9-bbl. pumper in No. 5 Ritchie at 537 feet; the Houchins Leasehold Co.'s No. 6 Ziegler started off at 8 bbls. at 573 feet, after a 20 quart shot in 12 feet of sand. Casing was set at 143 feet.

In Metcalf County, Helper & Co.'s No. 1 Toby, on Little Barren River, is a small gasser at 364 feet. In the same district, T. L. Gorby's No. 1 Ball was reported dry at 462 feet.

Wittner & Co. are reported to have drilled in a 4-bbl producer on the D. Davis farm, 5 miles southwest of Greensburg, in Green County, at a depth of 603 feet. Shale was found from 390 to 436 feet. The sand from 589 to 602 feet was shot with 40 quarts.

Monroe County.

Boyles & Co. are starting a test on the Kidwell lease, on Big Sulphur Creek, 7 miles southwest of Tompkinsville, in Monroe County.

A rig belonging to C. E. Dice is being assembled on the Vance lease on Little Sulphur Creek, 6 miles east of Tompkinsville. This will be the first drilling ever done on the north prong of Little Sulphur.

Unknown parties are drilling a test on the Ross farm, east of Tompkinsville, on Meshcak Creek, adjoining the Cumberland County line.

Cumberland County News.

Considering the general inactivity throughout the country the Cumberland County Field has done very well the past week, and in spite of the drop in oil the general feeling is that conditions will begin to improve soon.

Grant, Curtis and associates are preparing to put down a test on the B. G. Gilbert lease on Brush Creek. This test will be about a third of a mile southeast of the nearest wells on the Hicks lease, in that pool, and will test a portion of the Brush Creek territory which has not yet been developed, but which is thought to be on structure.

Kettle Creek.

McClintock and Raydure have just finished deepening No. 4 Anderson on Kettle Creek. This well was a producer in the lower Sunnybrook but had dropped to about 10 bbls. a day so they have drilled it to the sand 118 feet below the Pencil Cave. It has not been tested yet but is thought to be good for from 75 to 100 bbls. It produced for a long time from the Lower Sunnybrook at from 440 to 460 feet, got the Pencil Cave at 510, a little pay that with a shot might have made a small pumper, but which was passed through, and got the present pay at from 605 to 623. The small pay was in the Judio and the big pay in the Modoc sand.

The McClintock Oil Co. has a good well in the Lower Sunnybrook, in No. 7 Bud Kerr, on Kettle Creek, but continued to drill down as it was to be a deep test of the lower sands. It is now about the 950 mark and will go perhaps to the 1,400-foot level, or Kanawha sand. Pencil Cave was topped at 550 feet.

Colonel Petit's No. 1 Widow Dodson was plugged and abandoned at 60 feet below the Pencil Cave. It is reported the Young Oil Co. struck a good showing of oil in No. 3 Coffee at 20 feet below the Pencil Cave. This sand will be tested before the well is carried deeper. The Daniel Boone Oil Co. was spudding its No. 7 Widow Logan. It will be a deep test and is between Nos. 1 and 2. The rigs on the Kim Crawford, Mary Scott, Cleve Blythe and Turn Smith leases were all shut down.

In the Cumberland River Valley, Wilcox Brothers are drilling No. 2 Raney at 560 feet; Goff and Garvin have set up their rig on the Parris lease in the same area and will spud in the first of the week. This lease is owned by W. P. Mason and associates of Alliance, Ohio.

Bear Creek District.

The Oil Fork Development Co.'s well on the F. F. Smith lease, in the Julio Bow Hollow of Bear Creek, was 60 feet below the Pencil Cave where it is hung up with a bad fishing job. The Modoc sand is expected to be found in this well at from 90 to 120 feet below the Pencil Cave and being hung up when so close to this pay that has done so famously in this district, is very trying on the nerves of the whole oil community which is watching this test with eager eyes. Wilcox Brothers' test on the Phare was drilling at 940 feet, 580 feet below the shale. A showing of oil in the First Sunnybrook is all that has been encountered so far. The Wabash Valley Oil & Gas Co.'s No. 1 Rush, between Otter and Bear Creeks was shut down; No. 2 Shelckes, one-half mile northeast of the Dickens well of E. M. Treat & Co. was also shut down at around 900 feet.

Fanny's Creek District.

The Vedder Oil Co., which is developing the Tompkins lease in the Fanny's Creek Pool, is preparing to drill No. 1 to the Upper Sunnybrook sand. This is the well that made a 17-bbl pumper in a stray sand at from 166 to 198 feet, below the Chattanooga black shale. This is the same sand that produced the gusher in the Matthews well, 18 miles north, on Crocus Creek, in the excitement of 1866. It has produced an occasional well but is too near the surface to be depended on and usually contents itself with a small flow of gas. Up to date the 17 bbl. Tompkins well has paid for its own development and if it finds a good well in the Sunnybrook it will start out on velvet. This same company is arranging to start No. 1 on the Scott farm, adjoining.

Judio Creek Work.

The Judio Company, Inc., has just given No. 2 J. B. Hume, on Judio Creek, the largest dose of glycerine yet administered in the Cumberland County Field, 120 quarts. This was an edge well in the Judio sand and after pumping for two years it was found the oil level had been reduced below its horizon and W. B. McCormick, the manager, decided to

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News of Mexican Fields

By George Blardone

TAMPICO, Mex., July 26.—With some 20 wells completed in Mexican fields during the past week, 13 can be placed in the production column, while 7 failures are recorded. The failures were all in the Panuco Field. Eleven wells there are producers with a potention head production of 12,950 bbls. In the South Fields, two producers were completed. One is rated good for 1,500 bbls.; and the producing capability of the second one is not known at this writing.

In the Panuco Field the pay completions during the week follows: International Petroleum Co. led the list with three wells with potential production listed at 5,400 bbls. The wells were: No. 31-A, Lot 4, Cacalilao, 400 bbls. at 1,620 feet; No. 75, Lot 5, 4,000 bbls. at 2,158 feet; No. 80, same, 1,000 bbls. at 2,110 feet. Transcontinental Petroleum Co. was next in line with No. 90, Lot 4, Cacalilao, rated 2,000 bbls. at 1,700 feet; No. 6 Paciencia, just north of Cacalilao is rated at 1,000 bbls. at 2,075 feet; and in an old sector of the Panuco, No. 17 Barbarena is rated 300 bbls. at 1,800 feet. La Corona Petroleum Co.'s No. 96, Lot 2 Cacalilao, is a 700-bbl. well at 1,875 feet, but in the old Salvasuchi sector it rather surprised itself with a 2,000-bbl. well (No. 87) at the very shallow depth of 1,452 feet. Mexican Sinclair Petroleum Corp.'s No. 69, Lot 3, Cacalilao, is finished at 1,700 feet, rated 1,000 bbls. Mexican Gulf Oil Co.'s No. 64, Lot 1 Cacalilao, stopped the drill at 1,775 feet where the production is good for 300 bbls. Panuco Boston Oil Co.'s No. 1, Lot 17, Lomas y Llanos, is called 250 bbls. at 2,130 feet.

The failures were: La Corona Petroleum Co.'s No. 98, Lot 1, Cacalilao, a dry hole at 2,242 feet; No. 89 La Polla, in the older Panuco, is a salt water well at 2,210 feet. International Petroleum Co.'s No. 60, Lot 4, Cacalilao, is a salt water well at 1,910 feet. Mexican Sinclair Petroleum Corp.'s No. 46, Lot 2, is a failure at 2,104 feet. The Texas Co.'s No. 14, Lot 17, Lomas y Llanos, is a failure at 2,350 feet. Transcontinental's No. 106, Lot 1, Cacalilao, is a failure at 2,050 feet.

In the South Fields, Mexican Sinclair Petroleum Corp.'s No. 13, Lot 176 Amatlan, drilled into the pay at a subsea level of say 1,543 feet. The production has not been tested, but it is thought an estimate of 1,500 bbls. is about right. Penn-Mex Fuel Co.'s No. 4 Jardin, southeast of its Alamo Pool, is reported a well, but details have thus far been withheld. It

(Continued on Page 138)

North-Central Texas Field

By Dan F. Dugan

Walker & Caldwell's No. 1 Walker, Stephens County, makes 300 bbls.; No. 2, 350 bbls. Oil sand in Waite Phillips' No. 1 Wilson, Horrits survey. Fall County school lands to be tested. Electra Gulf Oil Co.'s No. 6 Mrs. Murray, Watkins Pool, near-completion, 250 bbls.

FORT WORTH, Tex., July 28—North Texas production for the past week registered an increase of 284 bbls. daily compared with the previous week, with a total of 123,409 bbls. daily for the seven day period. Gains were reported from Electra of 345 bbls., Iowa Park 229 and and the wildcat pools, 1,105 bbls. daily. The gain in the wildcat pools was reported from Reagan County which increased its production 1,440 bbls. daily over the last week's output. Losses were distributed as follows: Burkburnett 50 bbls., Stephens County 1,130 and Eastland 215 bbls. daily.

Nothing of a sensational nature was reported from any section of the North Central Texas Field. The largest completed producers were Walker and others' Nos. 1 and 2 Walker in Stephens County, credited with showing initial 300 bbls. each daily from the gray lime at 3,270 feet.

In the south section 10 completions were reported, seven oil producers and three dry holes. The north territory completed 50 wells, 28 oil producers, 20 dry and 2 gas wells. Both gas wells were located in the Amarillo district. Completions totaled 60 for the entire field, of which 35 were oil producers, 23 disappointments and two gas producers.

In the deep lime producing section a few tests were spudded, but the majority were shut down. The north section continues to report an average number of completions each week, several in Archer County that had been shut in waiting on pipe line connections were connected this past week and appear in the list of completions.

Archer County Development

Development is slowing up a little in Archer County. A number of tests were shut down and very little new drilling started. Several wells were completed in the productive tracts, but with small production. New locations, which, for a few months, have been made with daily regularity, decreased materially. In the producing pools a number of tests are drilling, but being inside wells will add nothing in extensions.

A development of importance with promise of adding to the county's producing area, was the finding of an oil bearing sand in the Waite Phillips No. 1 Wilson in the Horrits Survey. The Lay strata was encountered at 1,521 feet, was cored into 2 feet, casing was set and bailing will commence this week.

Blake and others' No. 1 Kelly, Block 68, about 5 miles west of Archer City which for a time after testing an oil sand at 1,439 feet, looked as though it would make a producer, has been drilled to a depth of 1,720 feet and abandoned.

Fall County School Tests

Holmes and others' No. 1 Wilson, 2 miles due east of Archer City, picked up a new sand at 1,302 feet, a core of which showed oil. It will be tested as soon as casing is set. Four tests are —making ready or have started to drill on a tract of approximately 7,000 acres in the southwest part of the county known as the Fall County school land. The companies starting operations are the Humble Oil & Refining Co., Camp Oil & Gas Co., the Texhoma Oil & Refining Co. and E. J. McJunkin. The outcome of the operations of these four companies is awaited with keenest interest, not only by the operators and others interested in adjoining acreage, but by the county schools of Falls County, as, in the event production is obtained, these schools will probably be the richest in the State. The land is owned in fee by Falls County for the benefit of its County School fund, which, according to reports, has already been considerably enriched by proceeds from the sale of acreage though not to be compared with the royalties that will accrue to the Falls County schools in the event of the discovery of oil in paying quantities in that territory.

Work is progressing on the Wichita Pipe Line Co.'s extension from the Wilmot Pool to the Swastika Field, three gangs of workmen being employed. One crew is laying connecting lines in the field, another is building the field pump stations while the third is laying 4-inch pipe from the Wilmot Pool.

The first run of oil has been made through the recently completed 2-inch pipe line from the Ragle Pool to the plant of the Olney Oil & Refining Co. on the Wichita Falls & Southern Railroad, 1 mile north of Olney and about 2 miles southwest of the Ragle Pool. The discovery well, Knight & Hines' No. 1 Ragle, is maintaining a daily average of over 50 bbls. produced from a sand found at 1,078 feet.

The largest completion for the week was Bridwell & Heydrick's No. 7-F Wilson, showing 150 bbls. at 1,585 feet.

Wichita County Producers

Several fair producers were completed in the proven areas to the south of Iowa Park and in the district along Beaver Creek in the southern part of the county. Drilling activities showed a big drop in actual drilling; new locations were few and taken as a whole, the week just ended was the quietest one for some time.

In the territory south of Electra and on the various leases in Sections 5 and 6, Tom Burnett, southwest of Fowlkes Station, a number of tests are drilling.

The best near completion for the week was the Bass, Dillard & Bowers' No. 5 Peeler in the Watkins Pool., 200 bbls. daily from the sand at 1,652 to 1,658 feet. In the same district the Electra Gulf Oil Co.'s No. 6 Mrs. Murray from the 1,760-foot pay is good for between 250 and 300 bbls. per day.

Further to the west and south of these producers, the United Central Corp. completed No. 7 McCarty for 360 bbls. after being placed on the pump. The sand was picked up at 1,673 feet and was penetrated 13 feet. The same company's Nos. 8 and 9 McCarty are nearing the sand and are expected to be completed within a few days.

On the Overby tract, the Electra-Gulf Oil Co.'s No. 4 is swabbing at the rate of 300 bbls. a day from the sand at 1,668 feet.

John O'Donohoe's No. 3 Maer in the same district, is making 250 bbls. a day from a sand picked up at 1,561 feet and drilled 2 feet.

Burkburnett-Hirschl.

Drilling—Baldwin Brothers' No. 16-C Kennedy, drilled a dry sand at 1,085 and pulling casing to drill deeper; Cochran and others No. 1 Ruyle, drilling in shale at 600 feet; Magnolia Petroleum Co.'s No. 6 Beach, drilling top of oil sand at 1,040 feet; Texhoma Oil & Refining Co.'s No. 1-B Rexford, drilling in blue shale at 1,330 feet; White and others' No. 1 Donohoe, rigging to pump and test sand showing oil at 1,320 feet.

Wichita County.

Completions—The Texas Co.'s No. 294 Waggoner, 40-bbls. at 1,623 feet; Apple and others' No. 5 Jennings, dry at 1,890 feet; Burnett Ranch Oil Co.'s No. 3 Burnett, 125 bbl. at 1,575 feet; Cowling and others' No. 3 Seay, dry at 405 feet; Gulf Production Co.'s no. 22-A Burnett, 135 bbls. at 1,585 feet; Kentucky Oil Corporation's No. 1 Burnett, dry at 1,675 feet; Magnolia Petroleum Co.'s No. 6 Jeff Waggoner, 5 bbls. at 560 feet; Stacy and others' No. 1-B Burnett, dry at 1,980 feet; Section Two Oil Co.'s No. 2 Burnett, 35 bbls. at 1,590 feet; Taylor and others' No. 3 Yarborough, dry at 525 feet; Texhoma and Perkins' No. 1 Burnett, dry at 1,960 feet; United Central Oil Corporation's No. 7 McCarty, 350 bbls. at 1,690 feet; Dr. Wallace's No. 3 Fassett, dry at 2,003 feet; Humble Oil & Refining Co.'s No. 2 Allen, 30 bbls. at 1,758 feet.

Wichita County Drilling.

Drilling—Adams and others' No. 1 Wigley, drilling in rock at 1,820 feet; Burnett Ranch Oil Co.'s No. 4 Burnett, drilling in shale at 1,550 feet; Clopton and others' No. 1 Waggoner, drilling in rock at 1,540 feet; Camp Oil & Gas Co.'s No. 11-B Douglas, trying to sidetrack 100 feet of drill pipe at 1,930 feet; Culberson and others' No. 26 Jeff Waggoner, rigging to pump and test sand at 1,410 feet; Douglas and others' No. 3-A Jennings, fishing for tools at 515 feet; Empire Gas & Fuel Co.'s No. 5 Pierce, drilling at 1,480 feet; Evangeline Petroleum Co.'s No. 1 Burnett, drilling at 800 feet; Gulf Production Co.'s No. 61 Miller, drilling in shale at 1,620 feet; No. 23-A Burnett, drilling at 1,410 feet; No. 24-A Burnett, drilling at 1,400 feet; No. 9 Collett, drilling at 1,400 feet; Hammond and others' No. 1 Burnett, drilling in rock at 1,570 feet; Howell and others' No. 1 Burnett, drilling at 1,810 feet; Jackson and others' No. 1 Blagg, drilling in shale at 1,605 feet; Lee and others' No. 1 McCarty, shut down for orders on top of dry sand at 1,350 feet; No. 2 McCarty, drilling at 340 feet; L. J. K. Oil Co.'s No. 1 Henson, drilling at 100 feet; Magnolia Petroleum Co.'s No. 7 Jeff Waggoner, drilling at 510 feet; No. 36-A Waggoner, underreaming 5 3-16 inch casing at 1,896 feet; No. 7-A Waggoner, drilling at 1,215 feet; No. 38-A Waggoner, drilling at 960 feet; No. 3-C Waggoner, drilling in hard rock at 2,095 feet; John O'Neil's No. 3 Burnett, drilling at 685 feet; Panhandle Oil & Refining Co.'s No. 6 McCarty, drilling in soft rock at 1,250 feet; Ryan Petroleum Co.'s No. 22 Nance, drilling in dry sand at 1,685 feet; Rio Bravo Oil Co.'s No. 7-A Waggoner, coring in oil bearing sand at 1,560 feet; Shaw and others' No. 2 McCarty, swabbing to clean out, sand showing oil at 1,230 feet; Texhoma Oil & Refining Co.'s No. 6-C Burnett, pumped 80 bbls. in 18 hours at 1,575 feet; No. 7-C Burnett, swabbed 200 bbls. in 12 hours at 1,580 feet; No. 8-C Burnett, swabbed 60 bbls. in 6 hours at 1,590 feet; United Central Oil Corp.'s No 8 McCarty, drilling in shale at 1,385 feet; United Production Co.'s No. 5 Jennings, drilling with rotary at 210 feet; Bowes and others' No. 5 Peeler, swabbed 200 bbls. at 1,660 feet; Campbell and others' No. 1 Chilson, shut down on top of oil sand at 1,830 feet; Cline Oil Co.'s No. 1-B Allen, drilling in shale at 1,555 feet; Church and others' No. 2 Maer, drilling in oil sand at 1,770 feet; Dee and others' No. 1 Mangold drilling in rock at 1,749 feet; Electra Gulf Oil Co.'s No. 4 Mrs. Murray, standarizing on top of oil sand at 1,660 feet; No. 6 Mrs. Murry, swabbed 250 bbls. from sand at 1,765 feet; Gulf Production Co.'s No. 1 Rhodes, drilling at 1,280 feet; Hill and others' No. 8 Overby, drilling in shale at 1,100 feet; Parker Brothers' No. 1 Love, underreaming 8¼ inch casing at 1,410 feet; Petroleum Production Co.'s No. 4-A Allen, setting 6⅝ inch casing at 1,780 feet; No. 3 Maer, standardizing on top of oil sand at 1,650 feet; No. 4 Maer, drilling at 1,670 feet; Underwood Drilling Co.'s No. 4 Maer is resetting 6⅝-inch casing at 795 feet; No. 5 Maer, drilling shale at 1,730 feet; United Central Oil Corp.'s No. 1 Mrs. Murray, will test oil sand at 1,815 feet.

Wilbarger County.

Drilling—Baker and others' No. 1 Morris, drilling at 300 feet; Castleberry and others' No. 1 Bowers, is a rig; Dill Farm Oil Co.'s No. 1 Dill, drilling in shale at 490 feet; Dumas and others' No. 1 Stephens, drilling at 685 feet; Herring and others' No. 1 Castleberry, drilling in hard rock at 1,200 feet; Magnolia Petroleum Co.'s No. 45 Sumner, underreaming 8¼ inch casing at 1,510 feet; Noble Oil Co.'s No. 1 Waggoner, underreaming 6⅝ inch casing at 1,645 feet; Pigg and others' No. 1 Davis, straightening crooked hole at 650 feet; South Vernon Oil Co.'s No. 1 Richardson, trying to land 6⅝ inch casing at 1,260 feet; Tex Wyoming Oil Co.'s No. 1 Zipperly, sidetracking tools at 2,160 feet; Thelma Wells' No. 1 Wharton, drilling in shale at 1,735 feet.

Archer County.

Completions—Andrade and others' No. 1 Coffield, dry at 1,608 feet; same company's No. 1 Graham, dry at 1,607 feet; Bridwell and others' No. 7-F Wilson 150 bbls. at 1,589 feet; Camp Oil & Gas Co.'s No. 2-B Wilson, 100 bbls. at 1,608 feet; Carey Drilling Co.'s No. 3 Wilson, dry at 650 feet; same company's No. 4 Wilson, 20 bbls. at 1,630 feet; Donohoe and others' No. 4 Wilson, 100 bbls. at 1,627 feet; Duke and others' No. 1 Heron, dry at 1,103 feet; Franklin and others' No. 11 Parrish, 135 bbls. at 1,598 feet; Hobbs and others' No. 1 Wright, 25 bbls. at 1,413 feet; Humphrey and others' No. 3 White, dry at 1,637 feet; Bimbrew and others' No. 3 Perkins, dry at 1,793 feet; same company's No. 4 Perkins, dry at 1,060 feet; Maer and others' No. 1 Mrs. Curry, dry at 1,604 feet; Mahlstedy and Mook's No. 2 Wilson, 70 bbls. at 1,607 feet; Magnolia Petroleum Co.'s No. 2 Robertson, 80 bbls. at 1,403 feet; Norton and others' No. 2 Graham, 15 bbls. at 1,440 feet; Phillips and others' No. 1 Chancellor, dry at 1,805 feet; Prairie Oil & Gas Co.'s No. 9-E Wilson, 60 bbls. at 1,385 feet; Shamrock Oil Co.'s No. 2 Campbell, 100 bbls. at 1,348 feet; same company's No. 7 Harbison, 50 bbls. at 1,346 feet; same company's No. 3 Richardson, 90 bbls. at 1,348 feet; same company's No. 7 Richardson, 65 bbls. at 1,359 feet; same company's No. 7-B Richardson, 65 bbls. at 1,352 feet; same company's No. 2-D Richardson, 100 bbls. at 1,355 feet; same company's No. 3-D Richardsin 100 bbls. at 1,342 feet.

Archer County Drilling.

Drilling—The Texas Co.'s No. 1 Orton, setting 8¼-inch casing at 1,790 feet; Alford and others' No. 1 Schlimpf, drilling at 615 feet; Barbee and others' No. 1 Anderson, spudding; Archer Oil Corp.'s No. 2 Farmer, bailing and testing oil sand at 1,422 feet; Cannon and others' No. 1 Jackson, drilling in shale at 1,010 feet; Chambers and others' No. 1-B Andrews, rigging to pump and test oil bearing sand at 975 feet; Chenault and others' No. 9 Richardson, drilling at 1,125 feet; Clark and others' No. 2 Turbeville, has 700 feet of oil in hole and will pump at 1,021 feet; Dee Brothers'

"Good enough" to him meant perfection, so he smashed the mixing valves for the first Cooper Gas Engine

Martin A. Thiel, Chief Engineer of Gas Engine Department until his death in 1921.

When The C. & G. Cooper Company decided to build their first Cooper Gas Engine they picked Martin Thiel to design it. He, of all engineers in the country, knew gas engines. As one man expressed it, "He had been reared with engines and chose to live the remainder of his life with a gas engine." As an apprentice he had first learned the machinist's trade in an engine building shop. Later he was superintendent of gas engine construction at the Allis-Chalmers Company and then designing engineer of gas engines for the Westinghouse Machine Company. From this long and valuable experience he had developed a short creed, "Do it better than it has ever been done before." Men at the Cooper plant still tell how he personally inspected every piece for the first Cooper Gas Engine. When the shop superintendent refused to scrap the four mixing valves for the first engine, Mr. Thiel borrowed a hammer from a workman and smashed them himself, for, as he expressed it, "They might be good enough for some engines, but they are not good enough for mine." That first Cooper gas engine is still driving a gas compressor in the hills of West Virginia—almost as if it had a conscience and to fail would mean dishonor to the man responsible for its perfection.

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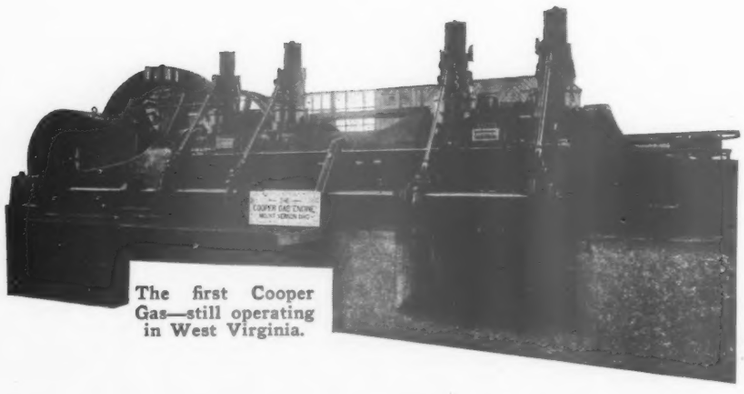

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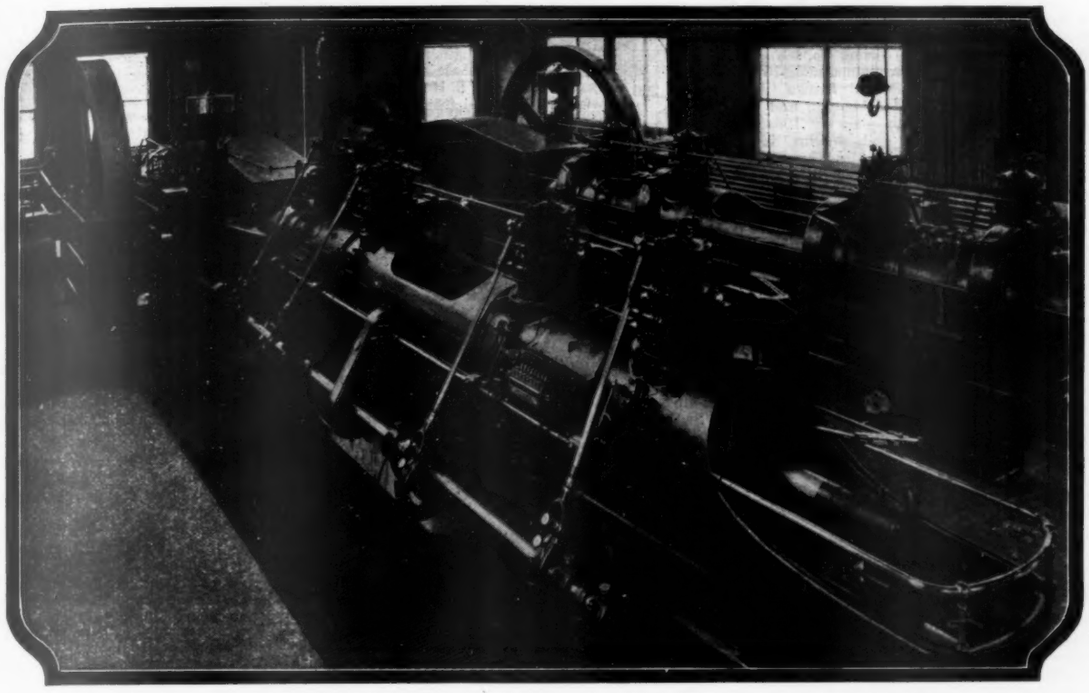

Magnolia Gas Company Chooses Complete Cooper Equipment

Our telephone just rang. It was Berger Larsen, the shop superintendent, asking, "When are you going to give us shipping instructions for these engines on order? Don't you know that we have to clean this assembly floor for the Magnolia engines?" But Berger isn't worrying as much as it might seem because he knows that there are over 600 other men on the job who are giving the best they have to help keep a delivery promise to Magnolia Gas Company covering ten big 1000 H.P. Cooper gas compressors and four 80 H.P. Cooper electric units.

It will require 80 carloads to transport this machinery to Lorain, Louisiana, and Pineland, Texas, where the two main compressor stations are being built on the 220 miles of 14″, 16″ and 18″ line from Webster Parish, Louisiana, to Beaumont, Texas.

This is possibly the largest single order for compressor equipment ever placed with one company and is but another indication of the confidence which the trade has in the engine building firm where every individual workman has learned to assume a responsibility for Cooper quality and Cooper service.

The above photograph shows two Cooper 485 B. H. P. gas engines in Central Ohio Gas Company's Ripley station.

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No. 1 Andrews, drilling at 1,350 feet; Dixon and others' No. 3 White, drilling at 1,560 feet; Dorrington and others' No. 1 Coffman, drilling at 1,520 feet; Franklin and others' No. 12 Parrish, drilling at 155 feet; Gherke and others' No. 1 Logan, drilling in rock at 1,250 feet; Gulf Production Co.'s No. 3 Seigle, resetting 6⅝-inch casing on top of oil sand at 1,570 feet; Hart and others' No. 1 Tuberville, drilling in shale at 1,420 feet; Holmes and others' No. 1 Wilson, testing oil bearing sand at 1,420 feet; Humble Oil & Refining Co.'s No. 2 Orton, drilling in shale at 1,000 feet; Jefferies and others' No. 1 Parrish, fishing for 6⅝-inch casing at 1,670 feet; Knight and Hines No. 3 Ragle, drilling at 820 feet; No. 4 Ragle, drilling at 680 feet; Landreth Production Co.'s No. 1 Tuberville, drilling at 1,200 feet; Lowry and others' No. 1 Harbison, have set 6⅝-inch casing on top of oil sand at 1,345 feet; Major Oil Co.'s No. 4 Tuberville, preparing to test sand showing oil at 1,030 feet; McLain and others' No. 1 Richardson, drilling at 300 feet; McPhail and others' No. 1 Wilson, drilling in rock at 1,490 feet; Murchison and others' No. 2 White, drilling at 1,500 feet; Norwood and others' No. 1 Orton, drilling at 655 feet; Oil Investment Co.'s No. 1 Robertson, drilling in soft rock at 1,255 feet; Pace and others' No. 1 White, drilling in soft rock at 1,255 feet; Pace and others' No. 1 White, drilling in shale at 1,065 feet; Panhandle Oil & Refining Co.'s No. 3 Orton, drilling in rock at 1,595 feet; Waite Phillips' No. 1 Ford, drilling at 1,640 feet; No. 1 Wilson, showing oil and cementing casting at 1,532 feet; Riner and others' No. 9 Wilson, shut down on top of dry sand at 1,620 feet; Saunders and others' No. 1 Logan, drilling at 700 feet; Shamrock Oil Co.'s No. 5 Campbell, drilling in shale at 400 feet; No. 8-B Richardson, drilling in shale at 1,210 feet; No. 2-C Richardson, drilling at 1,005 feet; Nos. 4 and 5-D Richardson, topped oil sand at 1,345 feet and shut down; Sheppard and others' No. 1 Albright, repairing boiler at 1,220 feet; Simms Oil Corp.'s No. 2 Nichols, drilling at 975 feet; Sunshine State Oil & Refining Co.'s No. 1 Reilly, drilling at 1,600 feet; Texhoma Oil & Refining Co. and others' No. 4 K. & K. has 750 feet of oil in hole and drilling sand at 1,790 feet; Tex-O-Kan Oil Co.'s No. 1 White, will pump and test oil sand at 1,400 feet; Tucker and others' No .1 Coffield, drilling at 1,380 feet; Woodburn Oil Corp.'s No. 8-B Wilson, drilling in shale at 1,680 feet.

Young County.

Completions—Mutual Oil Co.'s No. 12 Driver, 65 bbls. at 1,915 feet; North American Refining Co.'s No. 3-B Scott, dry at 2,675 feet; Smith and others' No. 1-A Benson, dry at 960 feet.

Drilling—Bashara and others' No. 1-A Graham, drilling at 1,240 feet; Carter and others' No. 1 Rubinkoenig, drilling in lime at 4,200 feet; Dunn and others' No. 1 Johnson, drilling at 305 feet;; Eagle Creek Oil Co.'s No. 1 Cheeves, drilling at 780 feet; Foster and others' No. 2 Mahoney, finishing job at 3,885 feet; Humble Oil & Refining No. 1 Graham, drilling at 1,300 feet; Keener Oil & Gas Co.'s No. 1 Bashara, has hole full of water and shut down for orders at 2,845 feet; McGarr and others' No. 1 Johnson, drilling at 1,905 feet; No. 1 Scarborough, drilling at 1,220 feet; Miller and others No. 1 Hume, drilling in shale at 2,205 feet; Monroe Production Co.'s No. 1 Vaugh, drilling in hard rock at 2,510 feet; Peter Oil Co.'s No. 1 Simms, showing oil and gas and underreaming 8¼-inch casing at 740 feet; Reed and others No. 1 Graham, drilling at 780 feet; Riley and others' No. 1 Buster, drilling at 300 feet; Union Oil Co.'s No. 1-A Keithley, drilling in soft rock at 2,130 feet.

Stephens County

Completions: Walker and others' No. 1 Walker, 300 bbls. at 3,270 feet; same company's No. 2 Walker, 350 bbls. at 3,275 feet; Pearson and others' No. 2 Williams, 35 bbls. at 2,165 feet; Scott and others' No. 1 Davis, 25 bbls. at 3,200 feet; The Texas Co.'s No. 10 Keithley, 30 bbls. at 2,425 feet; Walker and others' No. 1 Newman, dry at 2,205 feet.

Drilling: Brown and others' No. 1 Hudspeth, running 5-inch casing at 3,100 feet; Critten and others' No. 5 Cobb, drilling in shale at 3,025 feet; No. 6 Cobb, spudding; No. 2 Cunningham, drilling in blue shale at 2,970 feet; No. 3 Cunningham, drilling at 2,700 feet; Ivan Petroleum Co.'s No. 2 Martin, drilling in hard lime at 3,575 feet; Liner and others' No. 2 Brown, drilling at 1,260 feet; Marchbanks and others' No. 1 Hudspeth, showing 100 bbls. a day production and drilling in gray lime at 3,260 feet; Mid-Kansas Oil & Gas Co.'s No. 13 Hill, drilling in lime at 3,200 feet; No. 14 Hill, drilling at 2,450 feet; No. 3 Lowe, underreaming 12½-inch casing at 950 feet; No. 2 Lowe, underreaming 8¼-inch casing at 2,515 feet; No. 4 Lowe, drilling at 1,815 feet; No. 3 Richardson, drilling by casing at 3,185 feet; Prairie Oil & Gas Co.'s No. 15 Atkins, running 5-inch casing at 3,263 feet; No. 1 Caldwell, underreaming 10-inch casing at 2,050 feet; Raney Buckeye Oil Co.'s No. 2 Walker & Caldwell, drilling in rock at 3,635 feet; Rochelle and others' No. 2-A Sweeney, fishing for casing at 1,400 feet; No. 3-A Sweeney, running 6-inch casing at 2,015 feet; The Texas Co.'s No. 20 Black Brothers, drilling in gray lime with no oil showing at 3,365 feet; Texas Pacific Coal & Oil Co.'s No. 5 Rogers, drilling in black rock at 3,835 feet; No. 6 Rogers, shut down and showing some oil at 3,285 feet; Christie Brothers' No. 1 Gardenshie, drilling at 450 feet; Haile and others' No. 2 Jones, drilling without any oil showing at 3,920 feet; Ice and others' No. 1 McCleskey, drilling at 430 feet; Little and others' No. 2 Drake, drilling by casing at 3,650 feet; Magnolia Petroleum Co.'s No. 9 Brown, sidereaming 6-inch casing at 3,125 feet; No. 2 Brown, drilling at 3,730 feet; No. 5 Brown, pulling 5-inch casing at 3,820 feet; No. 6 Brown, drilling by tools at 3,215 feet; No. 1 Gardner, drilling in rock at 4,480 feet; No. 2 Gardner, drilling at 3,865 feet; No. 1 Taylor, at 1,055 feet; Pennok Oil & Gas Co.'s No. 1-B Jones, cleaning out and running 5-inch casing on top of gray lime at 3,190 feet; Pitzer and others' No. 1 Stoker, showing 5,000,000 feet of gas and fishing for tools at 3,955 feet; Prairie Oil & Gas Co.'s No. 1 Stoker, running 5-inch casing at 2,825 feet; Republic Oil Co.'s No. 4 Jones, drilling at 1,250 feet; Seaboard Oil & Gas Co.'s No. 1 McCleskey, drilling at 1,600 feet; Sinclair Oil & Gas Co.'s No. 9 Henderson, pulling big pipe at 3,100 feet; Snowden & McSweeney's No. 1 Jones, drilling in hard rock at 3,720 feet; No. 11 Jones, showing 50 bbls. a day production and drilling in gray lime at 3,185 feet; States Oil Corp.'s No. 1 Sipes, drilling at 3,270 feet; No. 1 Williamson, cleaning out and showing 8,000,000 feet of gas at 3,570 feet; Sun Oil Co.'s No. 11-A Rosenquest, drilling at 550 feet; Swensondale Oil Co.'s No. 1 Houston, drilling in blue shale at 2,650 feet; The Texas Co.'s No. 8 Heathley, drilling in soft rock at 2,570 feet; No. 40-A Parks, drilling at 3,265 feet; Texas & Pacific Coal & Oil Co.'s No. 1 Hand, drilling at 2,130 feet; No. 1-B Winston, showing 4,000,000 feet of gas and drilling at 1,275 feet; Thompson and others' No. 1 Adams, drilling at 380 feet.

Eastland County

Completion: Humble Oil & Refining Co.'s No. 3 Sneed, dry at 1,290 feet.

Drilling: Buffington and others' No. 1 Foster, fishing at 900 feet; Dixie Co.'s No. 1 Waggoner, will shoot at 3,685 feet; Hamilton and others' No. 1 Fox, spudding; Haynes and others No. 1 Howard, drilling at 900 feet; Humble Oil & Refining Co.'s No. 4 Sneed, drilling at 800 feet; Kirk & Brewer's No. 1 Young, 20 feet of oil in hole from sand at 3,045 feet; Magnolia Petroleum Co.'s No. 4 Edison, drilling at 580 feet; No. 16 Westmoreland, drilling in a sand with show of oil at 2,845 feet; McLester and others' No. 1 Gaily setting 6⅝-inch casing at 2,972 feet; Parsons and others' No. 1 Motes, drilling at 1,370 feet; Pennock Oil Co.'s No. 1 Parton, drilling at 600 feet; Root and others' No. 1 Wheeler, drilling at 500 feet; Bobo and others' No. 1 Amis, will shoot at 3,295 feet; Cardinal Oil Co.'s No. 2 Mathews, spudding; Continental Oil Co.'s No. 1 Sneed, showing some oil and drilling in lime at 3,575 feet; Donnelly Drilling Co.'s No. 1 Stubblefield, drilling in gray lime at 3,295 feet; McBride and others' No. 1 White, cleaning out after shot at 2,797 feet; The Texas Co.'s No. 1 Ramsey, drilling at 1,530 feet; Thornnell and others' No. 1 Stubblefield, showing 4,000,000 feet of gas and drilling at 3,150 feet; Turner and others' No. 3 Jones, fishing job at 2,400 feet.

Wildcats.

Baylor County—Drilling—Cranfill and others' No. 2 Mills, drilling in rock at 965 feet; Dallas Oil Co.'s No. 1 Showers, drilling at 100 feet; Independent Oil Co.'s No. 1 Robertson, drilling at 1,190 feet; Magnolia Petroleum Co.'s No. 1 Mills, after show of oil and gas, drilling at 1,465 feet; Moore and others' No. 1 Fancer, drilling at 345 feet.

Clay County—Completions—D'Yarmett and others' No. 1 Bullington, 20 bbls. at 1,195 feet; Cumley and others' No. 1 Stiner, flowed 130 bbls. in 24 hours at 1,780 feet; D'Yarmett and others' No. 1 Scott, drilling in rock at 465 feet; Scaling Oil Corp.'s No. 1 Scaling, drilling in soft rock at 2,625 feet; Shelton Oil Co.'s No. 1 Boddy, drilling with machine at 250 feet; Texland Producing Co.'s No. 1-B Johnson, drilling at 470 feet.

Montague County—Drilling—Boyd Oil Co.'s No. 1 Salmon, bailed 35 bbls. in 24 hours and shut down at 900 feet; Gulf Production Co.'s No. 1 Benton, drilling at 765 feet; Texhoma Oil & Refining Co.'s No. 1 Boling, shut down in water sand at 879 feet.

Throckmorton County—Drilling—Hale-Tex-Oil Co.'s No. 1 Elliott, drilling in shale at 780 feet; Houghland and others No. 1 McKnight, drilling at 350 feet; Humble Oil & Refining Co.'s No. 1 Stubblefield, drilling at 1,000 feet; Larkin and others' No. 1 Conger, showing 2,000,000 cubic feet of gas, hale full of water from sand at 1,195 feet; Texhoma Oil & Refining Co.'s No. 1 Reynolds, drilling at 900 feet; Whatley and others' No. 1 Todd, showing 1,000,000 cubic feet of gas and shut down at 820 feet.

Carson County — Completions — Waggoner and others' No. 1 McConnell, 40,000,000 cubic feet of gas at 2,680 feet; total depth 3,120 feet.

Carson County—Drilling—The Texas Co.'s No. 4 Burnett, underreaming 10-inch casing at 1,830 feet; No. 1 Mary Burnett, trying to kill gas flow at 2,705 feet; American Refining Co.'s No. 1 Burnett, drilling in lime at 2,935 feet; No. 2 Burnett, drilling in hard shale at 2,500 feet; Culberson Brothers' No. 1 Armstrong, drilling in lime and shells at 2,725 feet; Dancinger and others' No. 1 Burnett, drilling cave at 1,680 feet; total depth 1,850 feet; Gulf Production Co.'s No. 1-A Burnett, drilling in salt rock at 1,200 feet; No. 4-A Burnett, drilling cave at 1,570 feet; Silk and others' No. 3 Burnett, cementing pipe at 2,500 feet; Skelly Oil Co.'s No. 1 Burnett, drilling at 1,350 feet.

Cottle County—Drilling—Woodley and others' No. 1 Dulaney, has show of gas from sand lime at 1,760 feet.

Garza County — Drilling — Blackwell and others' No. 1 Boren, drilling at 1,500 feet; Union Petroleum Co.'s No. 1 Connell, drilling in soft rock at 500 feet.

Gray County — Drilling — The Texas Co.'s No. 1 Saunders, straightening crooked hole at 2,715 feet; Wilcox Oil & Gas Co.'s No. 1 Worley, shut down for storage at 2,925 feet; No. 1 Wilson, drilling in salt and red beds at 1,600 feet.

Hutchinson County — Completions—Producers and Refiners Oil Co.'s No. 1-B Bivens, 75,000,000 cubic feet of gas at 2,690 feet.

Drilling—Gulf Production Co.'s No. 1 Cockrell, drilling at 1,000 feet; No. 1 Whittenburg, drilling in salt and red beds at 1,805 feet; Prairie Oil & Gas Co.'s No. 1 Deahl, drilling in salt at 1,300 feet; Tex-O-Oil Co.'s No. 1 Johnson, has pipe trouble at 820 feet; Wilson and others' No. 1 Whittenburg, drilling in lime at 2,765 feet.

Potter County—Completions—Producers and Refiners Oil Co.'s No. 2-A Bivens, 28,000,00 cubic feet of gas at 2,425 feet.

Drilling—Amarillo Oil Co.'s No. 1 Warrick, straightening a crooked hole at 250 feet.

Wheeler County—Drilling—Cosden and others' No. 1 George, drilling in shale at 2,250 feet.

Callahan County—Completions: Dutton and others' No. 4 Cathey, dry at 780 feet.

Drilling: Bryant and others' No. 1 Forbes, drilling at 1,450 feet; Dutton and others' No. 1 Cafter, shut down for repairs at 895 feet; No. 1 Harrell, drilling at 800 feet; Poe & Wilson's No. 6 Albin, spudding; Sherring and others' No. 1 Cathey, drilling at 1,660 feet; Texas Pacific Coal & Oil Co.'s No. 1 Biggerstaff, drilling at 1,175 feet; Tidal Oil Co.'s No. 4 Cathey, drilling at 1,720 feet.

Crockett County—Drilling: Crockett

(Continued on Page 114)

East Central Texas

By Staff Correspondent

CORSICANA, Tex., July 28.—The past week was quiet in the Richland Field, which the previous week bursted out with a number of completions of large initial production. Completions in the Powell Field were of no particular importance and the wildcat areas did not offer anything of much interest.

Richland

In the Richland district the completions were few up to the filing of this report. The Boyd Oil Co.'s No. 6 Webb, on the White survey, started off at 900 bbls a day from sand at 2,928-68 feet.

Tucker and others' No. 2 Davis, on the John White survey, made 700 bbls. the first day from sand at 2,928-68 feet.

O'Bourne and others have a derrick up for No. 1 Bounds, Choate survey. The Atlantic Oil Producing Co. was rigged up on No. 2 Mrs. Richards and the Boyd Oil Co. rigged up on No. 8 Webb, White survey. Cranfill & Penn and the Shamrock Oil Co. rigged up No. 1 West, Choate survey. The Derby Oil Co. has a derrick up for No. 2 West on the Choate survey and had made a location for No. 1 The Gulf Production Co. has commenced drilling No. 1 Elkin, Choate survey. The Simms Oil Co. has a derrick up for No. 2 Allison, John White survey.

There are 17 locations, derricks up and derricks rigged up and 23 wells classified as drilling in the Richland Field.

Garland Kent abandoned his No. 2 J. F. Allen on the Smith survey in the Powell Field at 1,150 feet. It was a shallow test and there was no sand.

Birdwell & Grays' No. 2 Harvard, Mathews survey, made a 45-bbl well at 974 to 1,004 feet.

Davis & Spears' No. 3 Boyd, Mathews survey, started at 45 bbls. from sand at 985-1,002 feet.

McIntyre and others' No. 1 Woolens, Mathews survey, is pumping 200 bbls. a day from sand at 2,896-2,920 feet.

New work started in Powell included Birdwell & Gray's No. 3 Harvard, a derrick; and Garland Kent's No. 1-B Boyd, Mathews survey, drilling below set 6⅝-inch pipe at 863 feet.

In the Currie district the Brothers Oil Co.'s No. 1 Evans, Curry survey, was abandoned as dry at 3,251 feet.

In Franklin County J. E. McNeill and others are drilling below 2,330 feet in No. 1 J. E. Harper on the Clift survey.

In Freestone County the Brothers Oil Co. is drilling below 2,200 feet in No. 7 Bounds, Curry survey.

In Limestone County, Trout and others' No. 1 Roach found the top of the chalk at 2,811 feet and was drilling at 2,811 feet, still in chalk.

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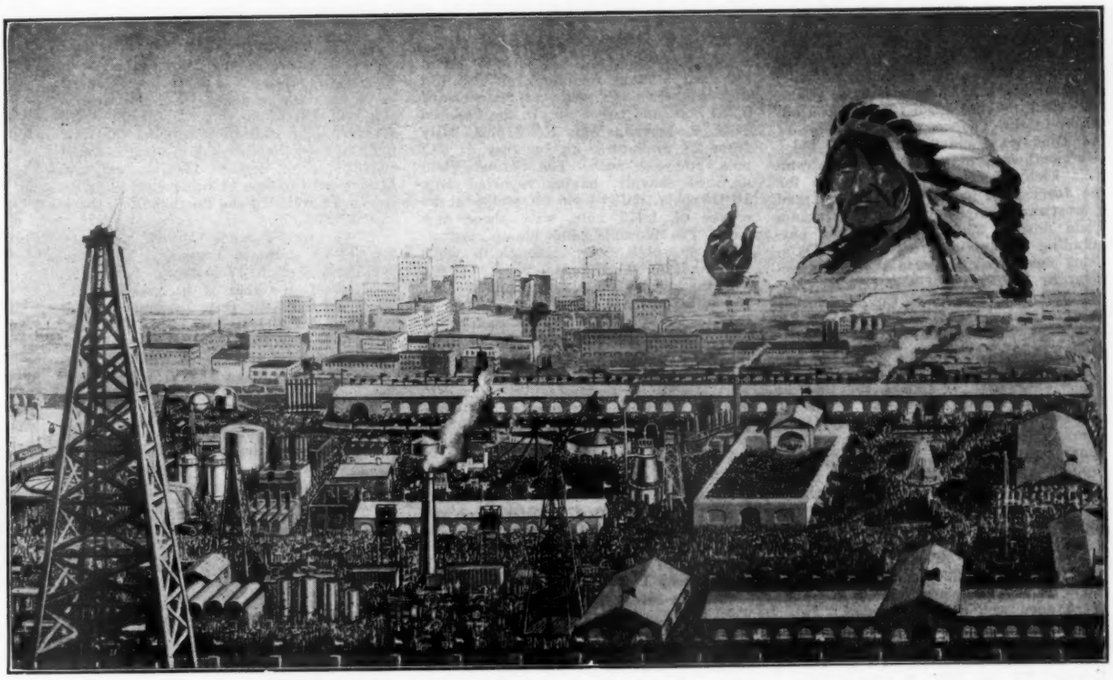

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Oklahoma Field Operations

By C. D. Lockwood

New well in Atlantic Pool, south of Pawhuska, flows 115 bbls. an hour. Record gusher for Cromwell Field, 5,160 bbls. Thomas area, northwest of Tonkawa, has 360-bbl. producer. Two northwest extensions of Cromwell Field. Josey Pool has 1,000-bbl. well, westward extension of Graham Field, 250 bbls.

A new well in the Atlantic Pool south of Pawhuska flowing 115 bbls. an hour, a record breaking gusher for the Cromwell Field making 5,160 bbls., a good addition to the Thomas area northwest of the Tonkawa Field producing 260 bbls., two northward extensions to the Cromwell Field, another 1,000-bbl. well for the Josey Pool in Okfuskee County, and a westward extension to the Graham Field flowing 250 bbls., were the outstanding production features in Oklahoma fields that preceded the announcement by the Prairie Oil & Gas Co. and the Magnolia Petroleum Co. of another substantial price cut.

The newest producer in the Atlantic Pool was brought in by the Marland Refining Co. in its No. 4, in the NW of Section 35-25-8. It topped the lime at 2,375 feet, found the second break at 2,666-68 feet and started flowing 115 bbls. hourly, flowing wide open. Saturday's gauge was 1,200 bbls., partially pinched in.

In the Cromwell Field, Seminole County, the Central National Oil Co. found 25,000,000 feet of dry gas in No. 1 Hall, SW cor. SE SE, Section 4-10-8, just a mile north of production. Sand was reached at 3,324 feet and drilled to 3,338 feet. The owners believe they will get a good well below the gas.

The other north extension of production was an oil well, the Carter Oil Co. and Gardner Petroleum Co.'s No. 1 Bruner, SE cor. SW, Section 9-19-8, a north offset to the Superior Oil Co.'s No. 1 Baker. The new producer topped the sand at 3,420 feet, found first oil at 3,426 feet, and was making 50 bbls. an hour when a gas flow at 3,436 feet raised the tools and dropped them, breaking the line. The tools were in the hole and a fishing job was in progress at latest reports.

Biggest Well in Cromwell

The biggest well in the Cromwell Field, up to Monday, was the Shaffer Oil & Refining Co.'s No. 8 Yarhola, NE cor. NW, Section 22-10-8, which was good for 5,100 bbls. in the first 24 hours from sand at 3,450-75 feet, the best pay having been encountered in the last 10 feet. The upper sand at 3,400-12 feet made about 60 bbls., while the well was drilling in. On Monday, this well was still flowing about 195 bbls. hourly. The same company's No. 6 Yarhola, C SW NE NW, Section 22-10-8, topped the upper sand at 3,397 feet and was drilling in the lower pay at 3,453 feet making 45 bbls. an hour. It was still drilling No. 7, a location west of No. 6 and south of No. 8, was drilling at 1,680 feet.

The Gypsy Oil Co.'s No. 2 Willis, NW cor. NE NW, Section 15-10-8, which topped the sand at 3,443 feet, reached the oil pay at 3,472 feet and was making 30,000,000 feet of gas and 82 bbls. of oil hourly.

The McMan Oil & Gas Co.'s No. 1 Little, SW cor. SE, Section 10-10-8, was making 35,000,000 feet of gas in sand at 3,369-3,450 feet.

One of the most unusual shallow freaks was a gasser in Jefferson County in the NE cor. NW, Section 19-7s-5w, drilled by Sykes, Henan & Co. It found a gas sand at 647-87 feet good for 32,000,000 feet of gas. Rock pressure was 300 lbs.

Output of the Fields

The Cromwell and Papoose pools gained in output during the week ended July 23, while the Wewoka and Stroud fields slumped. In the Cromwell Field, the daily average for the week was 45,648 bbls. from 48 wells, an increase of 5,364 bbls. and two wells. In the Papoose Pool, the average was 8,886 bbls. daily from 28 producers, an increase of 242 bbls. and one well. The Stroud Field declined sharply, having reported only 16,815 bbls. daily from 28 wells, a decrease of 1,475 bbls. with three new wells. The Wewoka field's slump amounted to 691 bbls. daily although 67 wells were making 6,888 bbls.

A further decline in operations brought the total down to 1,509 in the State, a loss of 27 operations. This included a loss of 2 locations, 23 rigs and 17 drilling wells while the shutdown wells went up 14 and the completions 1. There were on July 19 66 locations, 180 rigs, 875 drilling 298 wells shut down and 90 completions.

In the Thomas area, the Twin State Oil Co.'s No. 1 Siler, NW cor. Section 22-25-2w, a south offset to the Marland Refining Co.'s No. 1 Thomas, discovery well, topped the sand at 2,047 feet and found first oil at 2,051 feet. The best pay at 2,057-61 feet yielded 356 bbls. in the first 24 hours.

Deep Producer in Tonkawa

Another deep sand producer in the Tonkawa Field was expected at any time with McCaskey & Wentz setttng 6-inch casing preparatory to drilling in No. 18 McKee, C SE NE SW, Section 34-25-1w This well had a showing of oil and gas in the top of sand at 4,022 feet. It is a quarter of a mile northwest of the Pennock Oil Co.'s No| 7-A Endicott., which topped the sand at 4,139 feet. The Gypsy Oil Ca.'s No. 82 Shawver, on the north line of the NW of Section 2-24-1w, was drilling at 3,680 feet. The Comar Oil Co.'s No. 1 McCutcheon, NW cor. SW, Section 11-24-1w, was drilling at 4,195 feet in slate, with the hole caving badly.

In the Josey Pool, Okfuskee County, the Josey Oil Co.'s No. 4, McCray, SE cor. NW SW, Section 33-12-11, was making 1,080 bbls. from sand at 2,893-98 feet.

The west extension to the Graham Field was Wirt Franklin's No. 1 Lahman, C NE SE NE, Section 22-2s-3w, which was flowing 250 bbls. daily from 15 feet in the sand topped at 2,635 feet. It is an eighth of a mile west of production in the same sand although an offset to a 20-bbl. pumper in the 2,200-foot horizon.

In Tulsa County, the Darby Petroleum Co. had a rig up for its No. 1 Cowans, NE cor. Section 13-19-10.

Sparks and others abandoned their No. 1 Thomas, CEL NE SE, Section 8-18-13, as dry at 1,187 feet. Pouder & Pomeroy's No. 4 Rentie, CSL SE NE NW, Section 16-18-13, made 30 bbls. after a 100-quart shot in sand at 1,198-1,224 feet.

Thompson & Black abandoned No. 1 Harry, NW cor. SE, Section 5-16-13, at 1,800 feet.

South of Sapulpa in Creek County, the H. F. Wilcox Oil & Gas Co. and Oswalt's No. 2 Rogers, SW cor. NW SW, Section 1-16-11, was good for 150 bbls. natural from oil sand at 2,274-81 feet.

The Oklahoma Natural Gas Co. abandoned its old well, No. 1 Fulsom, SW cor. SE SE, Section 32-17-11, as dry at 2,910 feet.

In the Burbank Field, the Prairie Oil & Gas Co.'s No. 8, CNL NE NW SW, Section 13-27-5, topped the sand at 2,944 feet, found first oil at 2,960 feet and at 3,005 feet was good for 100 bbls. natural. After a shot of 90 quarts, it jumped to 600 bbls. The Phillips Petroleum Co. was drilling at shallow depths in several wells in the NE of Section 14-27-5, and the Carter Oil Co. was building rigs or drilling in 16 wells in the north half of Section 13-27-5.

In southern Pawnee County, the Carter Oil Co.'s No. 4 Truesdell, NW cor. NE NE, Section 17-20-6, was good for 75 bbls. after a shot of 40 quarts in oil sand at 3,025-40 feet. Adamson and others had 2,100 feet of oil in No. 1-A Myers, NW cor. NE SW, Section 32-21-8, from sand at 2,650-57 feet and shut it down for tankage and pipe line connections.

Burbank Production

Daily average production in the Burbank Field for the week ended July 23 was as follows:

Company—	Wells.	Bbls.
Carter Oil Co.	1,84	7,009
Comar Oil Co.	7	233
Cosden Oil & Gas Co.	105	5,354
Devonian Oil Co.	16	229
Gardner Petroleum Co.	20	589
Gypsy Oil Co.	196	8,488
Kewanee Oil & Gas Co.	22	706
Laurel Oil & Gas Co.	16	266
Lorraine Petroleum Co.	15	212
Midland Oil Co.	37	4,440
Mid-Kansas Oil & Gas Co.	33	2,363
Peters & Oliphant	1	130
Phillips Petroleum Co.	64	3,838
Phillips Petroleum Co. and Delmar Oil Co.	16	2,590
Phillips Petroleum Co. and Skelly Oil Co.	168	6,947
Prairie Oil & Gas Co.	106	4,825
Producers & Refiners Corp.	29	529
Roxana Petroleum Corp.	57	987
Simons, Moore et al	29	410
Sinclair Oil & Gas Co.	145	5,102
Skelly Oil Co.	21	1,609
Tidal-Osage Oil Co.	43	964
Twin State Oil Co.	24	2,271
Total	1,359	65,091
Total last week	1,354	66,230
Difference	5	1,139
Kay County extension—		
George S. Bole	3	1,036
Carter Oil Co.	11	1,567
Comar Oil Co.	19	1,005
Cosden Oil & Gas Co.	16	1,982
Gypsy Oil Co.	18	1,759
Laurel Oil & Gas Co.	2	237
Phillips Petroleum Co.	31	4,523
Mid-Kansas Oil & Gas Co.	10	1,425
Prairie Oil & Gas Co.	4	405
Pure Oil Co.	5	138
Roxana Petroleum Corp.	8	594
Dye, Tomlinson et al	8	750
Skelly Oil Co. and Phillips Petroleum Co.	19	665
Sinclair Oil & Gas Co.	5	418
The Texas Co.	16	935
Twin State Oil Co.	14	1,053
Total extension	189	18,592
Total last week	187	19,220
Difference	2	628
Total Burbank	1,548	83,683
Total last week	1,541	85,450
Difference	7	1,767

Following are the daily average pipe line runs from the Burbank Field for the week: Gulf Pipe Line Co., 11,841 bbls.; Cosden Pipe Line Co., 8,080 bbls.; Kay County Gas Co., 7,493 bbls.; Osage Pipe Line Co., 966 bbls.; Oklahoma Pipe Line Co., 18,932 bbls.; Prairie Pipe Line Co., 11,928 bbls.; Sinclair Pipe Line Co., 5,520 bbls.; Moore Refining Co., 2,974 bbls.; Standish Pipe Line Co., 6,018 bbls.; Empire Pipe Line Co., 2,156 bbls.; Mid-Kansas Oil & Gas Co., 3,788 bbls.; Magnolia Pipe Line Co., none; Twin State Oil Co., 2,151 bbls.; Ozark Pipe Line Co., 1,836 bbls.

Tonkawa Production

Following is the daily average production of companies in the Tonkawa Field during the week ended July 23:

Company—	Wells.	Bbls.
Amerada Petroleum Corp.	35	1,706
Blackwell Oil & Gas Co.	39	1,353
Carter Oil Co.	6	300
Champlin Refining Co.	2	39
Champlin Refining Co. and Twin State Oil Co.	1	41
Comar Oil Co.	319	18,842
Cosden Oil & Gas Co. and Marland Refining Co.	16	449
Gypsy Oil Co.	97	4,274
Healdton Oil & Gas Co.	27	1,403
McCaskey & Wentz	42	3,515
McMan Oil & Gas Co.	3	16
Pennok Oil Co.	27	4,375
Phillips Petroleum Co.	4	149
Prairie Oil & Gas Co.	12	659
Sinclair Oil & Gas Co.	1	20
Slick and Comar Oil Co.	31	4,606
Southwestern Petroleum Co.	15	646
White Eagle Oil & Ref. Co.	7	297
The Texas Co.	5	60
Total	680	38,154
Total last week	677	37,009
Difference	3	1,145

Daily average pipe line runs from the field were as follows: Kay County Gas Co., 11,799 bbls.; Ozark Pipe Line Co., 8,902 bbls.; Gulf Pipe Line Co., 3,604 bbls.; Champlin Refining Co., 6,831 bbls.; Bolene Refining Co., 1,320 bbls.; Globe Refining Co., 1,000 bbls.; Producers & Refiners Corp., 539 bbls.; Enid Oil & Pipe Line Co., 399 bbls.; Oklahoma Pipe Line Co., 200 bbls.; Empire Pipe Line Co., 670 bbls.; Golden Rule Refining Co., 185 bbls.; Prairie Pipe Line Co., 1,396 bbls.

The Globe Refining Co. was still running 1,500 bbls. daily from Moore tank farm.

The daily average production of the deep sand wells was as follows for the week: T. B. Slick's No. 1 Endicott, 2,502 bbls.; Pennok Oil Co.'s No. 7 Endicott, 2,792 bbls.; Comar Oil Co.'s No. 4-W Carmichael, 2,870 bbls.; total, 8,164 bbls., an increase of 1,175 bbls. over their total daily average for the previous week. This accounted for the field's gain. It was due to agitation of the three wells.

Deeper Drilling Productive

Another Osage County well was drilled deeper during the past week with large increase in production. The Mid-Kansas Oil & Gas Co. deepened its old well in the SW cor. Section 21-25-8, one foot to total depth of 2,687 feet and it made 2,795 bbls the first 24 hours while deepening and afterward increased to 3,000 bbls. Gravity of the oil tests 41 degrees. The same company was moving in timbers for No. 2 CSL SW SW, same section and E. B. Lawson was likewise moving in timbers for No. 9, CNL NE NW NW, Section 28-25-8. The Texas Co. was rigging up a machine for No. 7 CWL NW NE, Section 29-25-8 to offset the Lewis Oil Co.'s No. 1 CEL NE NW, same section, which was good for 75 bbls. the first 24 hours from the Bartlesville sand at 2,248-56 feet. Total depth was 2,281 feet.

The eastern limit of the Atlantic and Marland-Wilcox sand pool in Sections 27 and 34-25-8, was marked by the Marland Refining Co.'s No. 3, NE cor NW, Section 34-25-8, which was abandoned as dry at 2,815 feet.

Higgins and others plugged No. 1, CEL NE, Section 19-23-10, as a failure at 2,646 feet. The Mid-Kansas Oil & Gas Co. abandoned its location for No. 1, SE cor. Section 8-23-10. Fletcher and the Superior Oil Corp. plugged back from 2,260 feet to sand at 2,057-74 feet in No. 2, CSL NW NW, Section 20-23-10, and shot it with 60 quarts, after which it was good for 55 bbls.

The Osage-Arrow Oil Co. abandoned No. 16, SW cor, NE, Section 14-22-10, as a duster at 1,814 feet. The Tidal-Osage Oil Co.'s No. 20, CSL SW SW NW, Section 33-22-10, a twin to No. 1, found the Bartlesville sand at 1,762 feet, with oil at 1,785-1,800 feet and a second pay at 1,806-20 feet. A shot of 160 quarts from 1,786 to 1,820 feet made a 30-bbls. producer.

Northern Osage

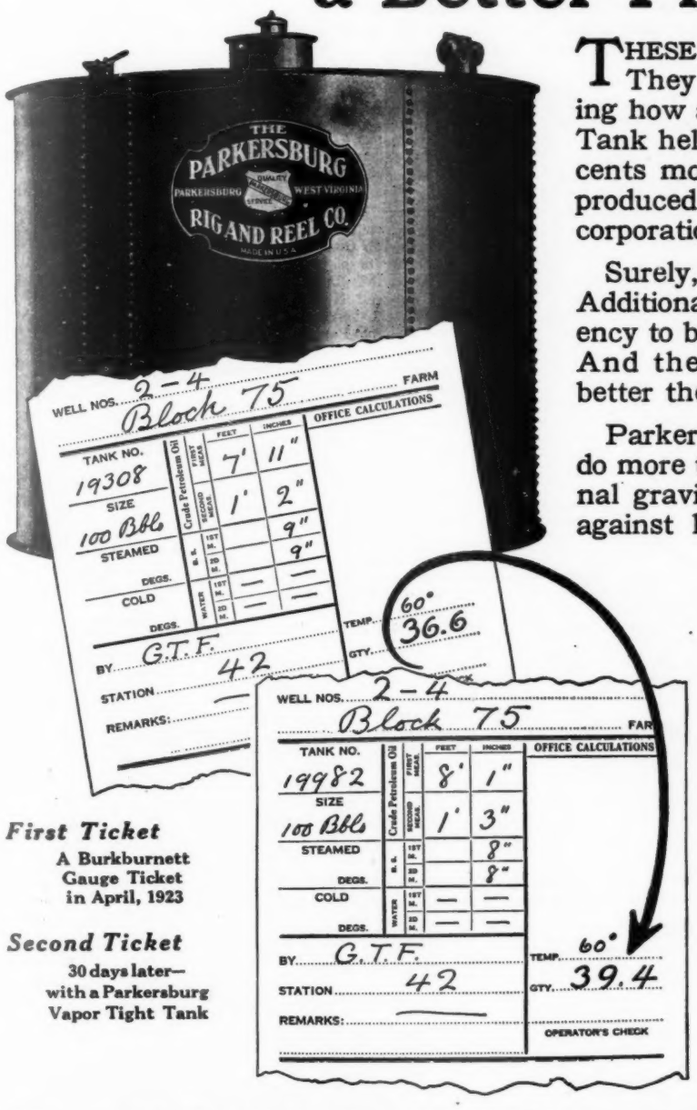
In the northern part of the county the Beacon Oil Co.'s No. 2 CWL SE, Section 27-29-11, was good for 75 bbls. natural in the Peru sand at 941-967 feet.

The Tulhoma Oil Co. abandoned No. 14, CEL SE NW, Section 31-28-11, as dry at 1,925 feet.

The Devonian Oil Co.'s No. 7 CNL NW SE SW, Section 34-25-11, was good for 45 bbls. after a shot of 100 quarts in the Bartlesville sand at 1,725-47 feet. M. Grace Maxwell's No. 4 CSL SW SE,

(Continued on Page 50.)

A Better Tank *and* a Better Price for Oil



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California Field Operations

By L. P. Stockman

Best completion at Torrance during week averaged 435 bbls. Only one really good producer brought in at Long Beach where number of completions is steadily declining. This completion flowed 2,060 bbls. No wells put on production at Santa Fe Springs. Four good wells completed at Dominguez.

LOS ANGELES, Cal., July 28.—There were several wells completed and put on production at Torrance during the past week, but as a rule, they were small. The Chanslor-Canfield Midway Oil Co. headed the list with three new wells. Number 38-A Torrance, the largest of the trio, was good for 435 bbls. of clean 25.2 gravity oil. No. 52 Torrance and No. 11 Kettler only resulted in 100-bbl. pumpers. The Shell Oil Co. finished five wells during the week but only one of them had cleaned up sufficiently to be put on a production test. The company's successful completion was No. 9 March, which is making 315 bbls. of 19.1 gravity oil, which shows a cut of 1 per cent. Number 8 March was finished at identicalyl the same depth as No. 9 but it has not yet cleaned up and is flowing a small amount of dirty oil to the sump. On the Kettler lease, the Shell finished Nos. 12, 13 and 14 but the production is still dirty and they, too, are pumping to sump. Number 4 Bluemle was finished at 3,875 feet and is being swabbed for production. On this same lease, No. 3 at 3,680 feet, No. 5 at 3,540 feet, No. 6 at 3,541 feet, No. 7 at 3,541 feet, No. 8 at 3,546 feet and No. 9 at 3,549 feet, are all scheduled for early completions, probably within the next two or three weeks. On the Scarborough property, No. 1 at 3,941 feet, No. 2 at 3,880 feet, No. 3 at 3,860 feet, No. 4 at 3,400 feet, No. 5 at 3,533 feet and No. 6 at 3,538 feet should also increase the Shell's list of producers very shortly. The company's No. 1 Keystone, while only a small well was expected, was somewhat of a disappointment, since its maximum output was 15 bbls. of low gravity oil, which is cutting 30 per cent.

The Standard Oil company put one well on production, No. 12 Marble lease, and is preparing several others for production tests. The Standard's successful completion, No. 12 Marble lease, was finished at 3,820 feet and, although the output, 250 bbls. of 16.1 gravity oil, is showing a cut of 10 per cent, it is believed that it will clean up in time. On the Dominguez property, the Standard is testing two wells and gave No. 6 Dominguez a try at production, but since, it is cutting approximately 80 per cent water, there is some doubt as to whether a shut off has been secured. Number 6 Interstate is scheduled to be swabbed within the next day or two, while the oil is being run in No. 2 Torrance. On the Sentiental-Joughin lease several wells are nearing completion depths and No. 3 is showing oil and gas at 3,650 feet. The Selby-Root Oil Co. secured a 300-bbl. pumper when No. 8 Griffin was put on the beam, after being drilled to 3,800 feet and finished with an 6¼-inch liner carrying 330 feet of 80 mesh screen casing. The company's No. 9 on the same lease is drilling ahead at 2,530 feet. The Fullerton Oil Co. got a 200-bbl. pumper in No. 8 Cotton from 3,810 feet. On this same lease, No. 4 Cotton is making hole at 3,167 feet and No. 6 at 3,120 feet. The Associated Oil Co.'s No. 2 Cunningham, the last of a group of three wells on this lease, resulted in a 225-bbl. pumper of 19.6 gravity oil. The Petroleum Midway (California Petroleum) put No. 1 Dosson on a test during the early part of the week but it proved somewhat of a disappointment. It is pumping 50 bbls. of fluid from 3,500 feet, 45 per cent of which is water and 25 per cent mud. It is possible that the company may have a little better luck with No. 2 Logan, which is ready to be swabbed at 3,890 feet and, although well No. 1 on this lease was only a medicore producer, No. 2 seems to have a little more kick and may be a satisfactory pumper.

Long Beach

The number of completions at Long Beach each week has been growing smaller for some time and the past week proved no exception. While there were several wells finished, there was really only one good producer brought in. On the Alamitos lease, the Shell Oil Co. finished a 2,060-bbl. flowing well. Number 18, the company's latest acquisition, was drilled to 4,850 feet. On the same lease the Shell is swabbing No. 17 at 4,601 feet and No. 18 at 4,850 feet. Number 3 Hutton at 4,957 feet is also being prepared for production and will probably be tanking oil within the next two weeks. The General Petroleum only secured a 150-bbl. pumper when No. 5 K. & H. was put on the beam, which tests 21.4 degrees, shows a cut of 20 per cent, it will probably clean up. Walter H. Fisher also experienced difficulty with water when his No. 3 Wasser, a recompletion, was put on the beam. On the pump, No. 3 Wasser is making 415 bbls. of 26.2 gravity oil, which shows a cut of 25 per cent.

Notwithstanding the fact that Long Beach at the present time is still producing approximately 154,000 bbls. a day, the amount of dirty oil produced is rapidly getting larger. Practically none of the major companies will accept this quality of oil and it has remained for the smaller refiners to dehydrate it and run it from the field.

The A. T. Jergins Trust completed well No. 10 at 4,800 feet and landed a 6¼-inch oil string at 4,798 feet. The company is at present bailing and at least a 500-bbl. flowing well is expected. The Henderson Petroleum Co. is preparing to put No. 1 Maloy on a production test after finishing it at 3,948 feet. The Marine Oil Co.'s well No. 17 just completed at 4,758 feet looks like the next big producer for Long Beach as it shows lots of life. No. 16 at 4,940 feet and No. 23 at 5,300 feet should also be early completions, although the latter, which has been swabbed for several days, is having some difficulty in getting under way.

Santa Fe Springs

There were no wells put on production at Santa Fe Springs during the week and probably the only work of interest is the Shell Oil Co.'s attempt to develop deep production in the center of the field. The company's No. 6A Slusher is drilling in a loose sand at 6,011 feet and, although cores are being taken quite frequently, no oil has been found to date. In the Huntington Beach Field, the Shell Oil Co.'s No. 6 Davenport proved the biggest surprise which that field has had in some time. The Shell drilled No. 6 Davenport to 5,087 feet a year or so ago in the hope of developing deep production but water trouble developed and it was necessary to plug back. It was accordingly plugged from 5,087 feet to 3,550 feet and, while the crew was installing a pump in order to put it on the beam, the well came in with a gush. During the first 24 hours 1,340 bbls. of 27.1 gravity oil was tanked. The well is showing an unusually good gas pressure, 450 pounds, and was a distinct surprise because of the fact that it offsets the Pan American's well No. 5, a much smaller producer. The Sun Oil Co. recompleted well No. 5 after redrilling and deepening it from 2,853 feet to 3,316 feet and secured a 180-bbl. pumper. The oil tests 21.2 degrees and shows a cut of 3 per cent. The Standard Oil Co. put well No. 21 on Lease A on a production test from 4,339 feet but did not list it as a completion because of the fact that it only pumped 15 bbls. of oil and 25 bbls. of water. Number 1-A Orange County Title, drilled to 5,510 feet, at which depth a small showing was found, was bailed down to 3,000 feet by the company for a casing test and if it proves satisfactory it should be put on a production test some time during the next week. The Union Oil Co. is bailing No. 1 Copeland at 3,690 feet, a former producer, and is swabbing No. 22 at 4,100 feet. The company's No. 2 Hill Community appears to be a water well at 4,406 feet.

Dominguez

The past week was a big one in the Dominguez Field, four wells being put on production with an aggregate initial daily output of 7,002 bbls., two by the Union Oil Co. and two by the Shell Oil Co. The Shell Oil Co.'s contribution to the field's list of producers were Nos. 5 and 6 on the Reyes Lease. The former is now the largest producer in the field and increased the company's production 3,690 bbls. of 32.3 gravity oil daily. Number 6 on the same lease came in flowing 1,732 bbls. of clean 32.4 gravity oil from 4,230 feet. The company's No. 1 Childs in the extreme eastern part of the field, is drilling in a shale at 4,200 feet, while No. 2 Childs is held up with a fishing job at 3,521 feet. The Union Oil Co.'s two wells were Nos. 1 and 3 on the Hellman property. The former, No. 1 Hellman, is a recompletion after having been redrilled and deepened from 4,191 feet to 4,201 feet. The output, 320 bbls. of 31.2 gravity oil, is flowing through a ½-inch bean under a pressure of 200 pounds. Number 3 Hellman, which proved up about 100 acres as highly productive for the Union, was perhaps the biggest surprise in the field during the week. This well, located in the northern part of the district, was brought in flowing 1,260 bbls. from the comparatively shallow depth of 4,263 feet. The Shell Oil Co.'s No. 1 Hellman, but a short distance north, passed up this shallow sand and is swabbing at 5,241 feet. The oil from the Union's No. 3 Hellman is clean and tests 32.4 degrees.

In Rosecrans Area

In the Rosecrans area, there were no unusual developments of importance although several operators are expecting to pick up the upper sand at any time.

Miscellaneous Drilling

There were no unusual developments in the Montebello Field during the week, except the proposed abandonment of the Arcadia Oil Co.'s well No. 1-A at 4,405 feet. In the Coyote Field, the Standard Oil Co. is making good headway with No. 39 Emery at 2,550 feet and No. 100 Murphy at 2,200 feet. The O'Donnell Refining Co.'s No. 2 Strong in the Rideout Heights section of the Whittier Field is still dry at 4,900 feet and this test, which is approximately 2f000 feet north of the company's deep sand producer at 4,260 feet, looks discouraging. In the Richfield district, Krohn-Blake & Hazard secured such a good showing of oil and gas at 4,127 feet that it was decided to stop drilling and set a string of 8¼-inch for an early production test. The Union's No. 3 Coyle, a flowing well from 4,556 feet, stopped flowing during the week and the company was making preparations to put it on the beam. The Cal-Petro Producers Syndicate is refinancing in an effort to drill 500 additional feet of hole in its No. 1 Fleming at Bellflower. This test was reported to have had some small showings at 4,220 feet and officials of the company are anxious to drill a few hundred feet deeper to test them out. The Associated Oil Co.'s Culver City test No. 1 Casserini is still dry at 4,700 feet and the Mohawk

(Continued on Page 136)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Standard, July 14, New York, crude	116,695
James McGee, July 14, New York, crude	115,816
John D. Archbold, July 16, New York, crude	135,952
H. H. Rogers, July 16, New York, crude	115,940
District of Columbia, July 17, New York, crude	75,743
Baldhill, July 18, New York, crude	66,651
Agwismith, July 19, New York, crude	104,745
J. C. Donnell, July 19, Philadelphia, crude	101,014
Japan Arrow, July 19, New York, crude	93,169
W. S. Rheem, July 20, New York, crude	90,487
Agwistone, July 20, New York, crude	105,470
Coastwise	
Los Alamos, July 14, Seattle, crude	37,436
William F. Herrin, July 14, Avon, crude	48,686
La Purisima, July 14, San Diego, fuel	35,740
Coalinga, July 15, Oleum, crude	75,819
Oleum, July 15, Martinez, crude	37,098
W. S. Miller, July 15, Richmond, crude	73,331
R. J. Hanna, July 16, Point Wells, fuel	76,040
Cathwood, July 18, Port Moody, crude	60,094
Atlas, July 18, San Diego, refined	12,110
W. S. Miller, July 19, Richmond, crude	71,612
Frank H. Buck, July 19, Everett, fuel	62,689
Montebello, July 19, Martinez, crude	73,588
Lubrico, July 20, Willbridge, fuel	84,983
Atlas, July 14, Hueneme, refined	13,644
Exports	
Capsa (Br.), July 14, Japan, fuel	55,483
British Beacon (Br.), July 14, Balboa, fuel	59,360
Utacarbon, July 14, Balboa, fuel	75,420
Foldenfjord (Nor.), July 16, England, refined	77,511
San Gaspar (Br.), July 16, Tampico, crude	116,741
Java Arrow, July 17, China, refined	76,390
Meton, July 17, Honolulu, fuel	80,476
Antietam, July 17, Buenos Aires, fuel	65,140
Mojave, July 18, Japan, crude	65,087
Mina Brea (Br.), July 18, Vancouver, crude	46,432
Santa Maria, July 18, Chile, fuel	90,248
Paul Shoup, July 19, Buenos Aires, fuel	72,169
From San Francisco	
Lebec, July 16, Portland, fuel	69,870
Stockton, July 16, Manila, fuel	77,820
Agwimoon, July 16, New York, refined	68,951
H. T. Harper, July 17, Portland, refined	31,095
Warwick, July 17, Seattle, refined	32,190
Richmond, July 20, Seattle, fuel	62,857
From Port San Luis	
Mericos H. Whittier, July 12, Wellington, fuel	79,126
Argyll, July 20, Chile, fuel	28,142

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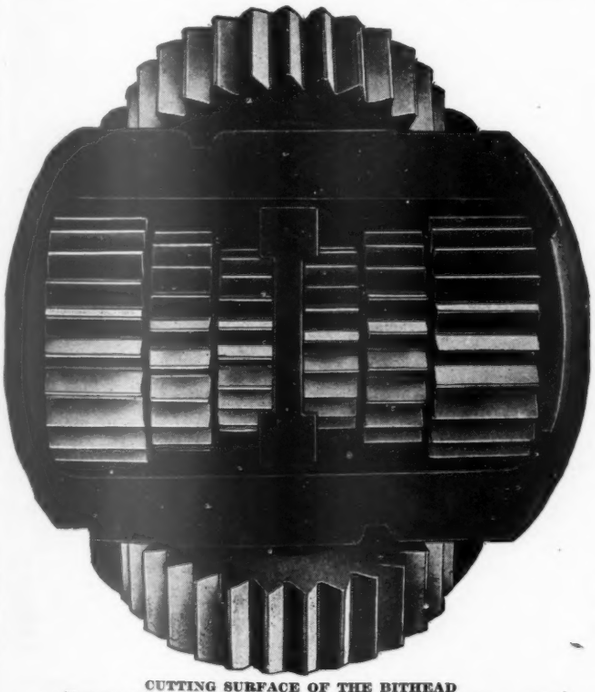

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OKLAHOMA FIELDS

(Continued From Page 46.)

Section 4-24-11, was a 15-bbls well after a short of 150 quarts in the Bartlesville sand at 1,695-1,740 feet.

The report of a test by the Peer Oil Corp. and Lorraine Oil Co. in the CSL NW, Section 1-22-11, was an error.

Knupp and others made a 50-bbl. well out of No. 2, CSL SE NE, Section 18-21-10, with a 30-quart shot in sand at 1,976-93 feet. Sand at 1,957-76 feet was good for 7,000,000 feet of gas. Breene and others' No. 9, which was a 225-bbl. well natural, CNL NW, Section 23-21-10, from Peru sand at 1,590-1,611 feet, was shot with 110 quarts and increased to 525 bbls.

The Fidlity Oil Co.'s No. 6, NW cor. NE, Section 16-21-12, was a 12-bbls well in the Bartlesville at 1,301-43 feet, after a 60-quart shot. The Selby Oil Co.'s No. 6, NW cor. NE, Section 16-21-12, was worth 10 bbls. after a 60-quart shot, from 1,364 to 1,379 feet. The Barnsdall Oil Co.'s No. 24, CNL NE NE, Section 31-21-12, topped the lime at 1,553 feet and made 686 bbls. from pay at 1,951-52 feet.

A. G. Oliphant was spudding No. 1 CSL NE NE SW, Section 19-25-8. The Tidal-Osage Oil Co.'s No. 6 CWL NW SW SE, Section 26-24-9, made 20 bbls, following a shot of 140 quarts, in sand at 2,116-46 feet.

In Pettit Pool

In the Pettit Pool the Red Bank Oil Co.'s No. 2, SEL SE SW, Section 20-38-8, ran into water at 2,830-37 feet and was plugged back to oil pay at 2,802-29 feet, good for 40 bbls. No. 3, SEL SW, same section, also found water at 2,581-53 feet and was plugged back to sand at 2,817-50 feet, making 40 bbls.

The Riverland Oil Co. was swabbing 60 bbls. from No. 4, CSL NE SW, Section 14-22-8, after a 60-quart shot, in the second break at 2,652-66 feet.

The Indian Territory Illuminating Oil Co. had a rig on the ground for No. 1, SW cor. NW NW, Section 1-21-8.

Burbank Field

In the Burbank Field the Mid-Kansas Oil & Gas Co.'s No. 7, SE cor. NW, Section 26-27-5, found the sand at 2,919-63 feet and after a shot of 100 quarts was good for 300 bbls. The Skelly Oil Co.'s No. 2, CEL SE NE SW, Section 26-27-5, topped the sand at 2,898 feet, found oil at 2,908-65 feet and was good for 60 bbls, after a 60-quart shot. The same company's No. 3, CEL NE SE SW, same section, made only 5 bbls, following a 60-quart shot in sand at 2,947-65 feet. No. 3, SEL NE SE NW, Section 35-27-5 was a 75-bbl well after it was shot with 60 quarts in sand at 2,925-53 feet. No. 4, Se cor. NW, same section, was good for 50 bbls. after a 60-quart shot in sand at 2,921-72 feet. The Kewanee Oil & Gas Co. was swabbing 35 bbls from No. 6, CSL SW SE SE, Section 18-27-6, at 2,901-52 feet.

The Phillips Petroleum Co. had a 150-bbl producer in No. 5, CSL SE SW NW, Section 20-27-6, following a 100-quart shot in sand topped at 2,884 feet, with from 2,909 to 2,950 feet. The Cosden Oil & Gas Co.'s No. 14, CNW SE SE, Section 17-26-6, produced 350 bbls. in the first 20 hours from sand at 2,861-2,933 feet, after a shot of 135 quarts.

The Phillips Petroleum Co. shot No. 12, CNL NW NE NE, Section 9-27-5, with 100 quarts in sand at 2,899-2,938 feet and it made 100 bbls. No. 15, CEL SE NE NE, same section, made 400 bbls. after an 80-quart shot in sand at 2,908-40 feet. The Cosden Oil & Gas Co.'s No. 11, CEL SE NE NW, Section 10-27-5, was shot with 25 quarts in sand at 2,907-32 feet and responded with 150 bbls. The Phillips Petroleum Co. and Delmar Oil Co.'s No. 3, NW cor. SE, same section, made 400 bbls after a 50-quart shot and No. 10 NE cor. NW SE, same section, 250 bbls, after a shot of 130 quarts.

Mounds Townsite

The Mounds townsite drilling campaign, southeastern Creek county, was proceeding nicely. Sheldon Oil & Gas Co. was building a rig for No. 1, Lot 6, Block 11, Section 8-16-12, and was moving in a rig for No. 1, Lot 4, Block 23, same section. L. P. Gowland had a rig up for No. 1, Lot 3, Block 26, same section. Roy Bowen and others were building a rig for No. 1, Lot 2, Block 35. Bradstreet and others had a rig in place for No. 1, Lot 21, Block 7. The Noble Oil & Gas Co. was moving in a machine for No. 2, Lot 4, Block 4. The Riverland Oil Co. was drilling at 2,050 feet in No. 5 Marshall, SW cor NE SE, same section. The same company's No. 6 Marshall, NW cor SE SE, same section, was drilling at 1,700 feet and No. 7 Marshall, CWL SW NE SE, same section at 1,350 feet. J. J. Schock was drilling at 630 feet in No. 1, Lot 10, Block 23 CNL NW SW SE, same section.

The Shaffer Oil & Refining Co. abandoned the rig for No. 1 McGilbra, NE cor. SE, Section 12-16-11.

Across the line in the southwestern corner of Tulsa County, L. E. Taylor and others abandoned No. 2 Wetstone, SW cor. NW NE, Section 3-16-12, as dry at 1,530 feet.

In the Key West townsite, Stroud Field, Hoyt & Wicker were drilling at 618 feet in No. 1, Lot No. 24, Block No. 4 and Berry and others were drilling at 420 feet in No. 1, Lot No. 12, Block No. 4. The Atlas Drilling Co. also had a rig in place for No. 1 Townsite, Lot 15, Block 8, Section 12-14-6.

The Selby Oil Co.'s discovery near Mannford, Creek County, its No. 1 Barnett, SE cor. NW, Section 31-19-9, was shot with 30 and 35 quarts and was cleaning out with 16 feet of caving in the hole. The well has been averaging 100 bbls. daily from oil sand at 3,069-3,100 feet, with total depth 17 feet deeper. The well has also been making seven or eight bailers of water. The Waite Phillips Co. was building a rig for No. 1 Gates, NW cor. SE. same section.

McClung and others abandoned No. Scales, SW cor. SE, Section 19-18-9 as a failure at 3,225 feet.

Kansas Oil Field News

By C. D. Lockwood

With the drilling in of the eighth producer in the Rainbow Bend Pool of Cowley County, good for 3.300 bbls. the first 24 hours and still holding up to 2,617 bbls. on Saturday, operators and scouts are convinced that a new pool of major proportions, possibly comparable to Eldorado and Augusta, is in the making. Having produced already more than 160.-000 bbls. of high gravity crude, and with a present output of more than 16.000 bbls. daily from eight wells, without a single duster or even small producer to mar its record, this pool is commanding the respectful attention of the entire Mid-Continent. The Waite Phillips Co. and others' No. 2 Glasgow, SE cor. NE SW, Section 30-33-3, was on the sand and due in at any time. The biggest well of the pool, No. 3 Johnson, SW cor. NW SE, same section, was still producing 2,617 bbls. Saturday morning. Sand was found at 3,215-27 feet.

The number of drilling wells continued to decrease while the shut down wells increased and the rigs and locations remained practically the same during the week ended July 19, indicating the effect that the proration policies and crude cuts are making in the Kansas Fields. On that date there were 37 locations, 68 rigs up, 160 wells drilling, 97 wells shut down and 15 completions.

In Greenwood County, the Empire Gas & Fuel Co.'s No. 3 Hutchins, C NW NW NE, Section 14-22-11, was good for 165 bbls. after a shot of 140 quarts in sand at 1,849-1,930 feet. Gray and others' No. 6 Clark, CSL SE NW SE, Section 28-22-11, topped sand at 1,917 feet and found pay at 1,941-78 feet good for 60 bbls. after a 60-quart shot. The York State Oil Co. abandoned the location for No. 7 DeMalorie, SE cor. Section 32-22-11, at 2,025 feet.

Day & Connell plugged No. 1, NE cor. NW SE, Section 1-22-10, as a duster at 2,566 feet. Rhodes & Abel shut down No. 1 Hughes, SE cor. SW, Section 18-22-10, at 600 feet, after plugging No. 4 Browning, C SE SW SE, same section, as a failure at 2,560 feet. R. G. Gillespie's No. 4 Browning, C NW SE NE, Section 19-22-10, was good for 100 bbls. from sand at 2,274-2,339 feet. The Sinclair Oil & Gas Co. abandoned its No. 3 Browning, C NE NW NW, Section 20-22-10, as dry at 2,382 feet.

Elk County

In northwestern Elk County Roth and others had a 100-bbl well after a shot of 140 quarts in No. 5 Porter, CWL NW SW, Section 12-29-8. Sand was found at 2,050-90 feet. The same interests' No. 6 Porter, CSL SW, same section, was a 110-bbl well after a shot of 160 quarts in sand at 2,007-43 feet. Connell & Nye were drilling No. 1 Thompson, NE cor. SW NE, Section 8-29-9 at 1,400 feet. Anderson Brothers were straight reaming the 6-inch to 1,735 feet in No. 1 Craig, C SW SE, Section 16-29-9. The Ohio Fuel Oil Co. had a 10,000,000-foot gasser in No. 1 Smith, C NE NE, Section 28-29-9.

The Pennok Oil Co.'s No. 2, SW cor. NE SW, Section 30-30-11, was good for 150 bbls, after a 20-quart shot in sand at 1,164,-80 feet.

The Clark Drilling Co. had 500 feet of oil in No. 2 Darnell, SW cor. NE NW, Section 12-30-9, from sand at 2,245-64 feet and was preparing to shoot it.

Eastman Pool

In the Eastman Pool of Cowley County, the Lewis Oil Co.'s No. 2 Robbins, CSL SE W, Section 31-20-6, was making 100 bbls. of oil and 200 bbls. of water from sand at 2,844-53 feet. The Southwestern Petroleum Co.'s No. 3 Eastman, CNL NW NE, Section 6-31-6, which was one of the largest initial producers in the pool, having made 730 bbls. when it came in, was down to 75 bbls. of badly cut oil and 200 bbls. of water.

The Lewis Oil Co.'s No. 1 Elliott, SW cor SE, Section 31-30-6, made 20 bbls of oil and 4,000,000 feet of gas from sand at 2,853-2,901 feet. The same company had a rig up for No. 3 Robbins, CSL SW, same section. The Southwestern Petroleum Co.'s No. 1 Stahr, SW cor. SE SW, Section 5-31-6, was making 5,000,000 feet of gas from sand at 2,77-2,857 feet after plugging back from 3,291 feet. The same company's No. 5 Eastman, NE cor Section 6-31-6, was good for 400 bbls. and 4,000,000 feet of gas from oil sand at 2,860-80 feet. No. 6 Eastman, NW cor. NE, Section 6-31-6, was making 15,000,000 feet of gas and 350 bbls of oil from oil sand at 2,867-68 feet. Garden & Smith had 4,000,000 feet of gas in No. 1 Stout, CNL NE SW NW, Section 8-31-6, from sand at 2,741-81 feet, with total depth at 2,838 feet. The Phillips Petroleum Co. abandoned the location for No. 2 Stout, NE cor NW NW, same section.

The Arkansas Fuel Co. had a rig on the ground for its No. 1 Newman, SE cor. NE, Section 12-32-4, about 2 miles north of the J. A. Hull Co.'s Bartlesville sand discovery. The latter company had a rig on the ground for No. 2-A Newman, CEL NE SW, Section 24-32-4, a west offset to the discovery. The same company was also building a rig for No. 1 Leimbrock, SE cor. SW NW, same section. The Arkansas Fuel Co. had another rig building for No. 2, NW cor. SW, Section 7-32-5. The Alcorn Oil Co. was drilling at 300 feet in No. 1 Padgett, NW cor. SW, Section 23-34-2.

The Watchorn Oil & Gas Co.'s No. 1 Keithley, NW cor NE NE, Section 36-32-4, was shut down repairing boiler, after pumping 45 bbls. of oil and 200 bbls. of water from sand at 3,104-08 feet.

Overlee and others were building a rig for No. 1 Sterling, C NE SW, Section 5-35-5.

Rainbow Bend Pool

In the Rainbow Bend Pool new rigs indicated that the Waite Phillips Co., Independent Oil & Gas Co. and Marland Refining Co. intend to develop the field as fast as conditions permit. A rig was being built for these companies' No. 1

(Continued on Page 130)

The Transcontinental Oil Co.'s No. 1 Brady, NW cor. SW, Section 34-16-4, made 38 bbls natural from sand topped at 2,910 feet, with oil at 2,929-40 feet, and was estimated as a 15-bbl pumper.

Shut Down for Tankage

The Independent Oil & Gas Co.'s No. 1 Harrison, NE cor. SW, Section 36-16-10, was spraying about 30 bbls of oil with 4,000,000 feet of gas from sand at 2,655-2,702 and 2,704-05 feet, and was shut down for tankage and 6-inch.

A rig was in place for the Lima Oil & Gas Co.'s No. 1 Big Pond, CWL SW NE SW, Section 25-15-7.

The Pure Oil Co. shot No. 12 Yarbola, NW cor. SW NE, Section 17-15-8, with 170 quarts in oil sand at 3,738-3,805 feet and it made 410 bbls afterward. The Mid-Kansas Oil & Gas Co.'s No. 1 Pelah, NW cor. NE SW, Section 29-15-8, was dry and abandoned at 3,815 feet. C. G. Tibbens was shut down at 3,800 feet on top of the Wilcox horizon in No. 2 Hill, NE cor. NW NW, Section 35-15-8.

The Phillips Petroleum Co. abandoned its old well, No. 1 Tiger, CNL SW NW, Section 4-15-9, as a duster at 3,575 feet. The Pure Oil Co. was spudding No. 1 Colbert, SE cor. NE NW, Section 29-15-9.

The Kawfield Oil & Gas shot No. 2 Sewell, NE cor. NW, Section 9-15-10, with 120 quarts in oil pay at 2,590-2,612 feet and made it a 15-bbl well.

C. G. Tibbens completed No. Oglesby, NW cor. SW NW, Section 18-14-9, for 80 bbls, after a 60-quart shot in sand at 2,289-2,339 feet. The same man was also drilling No. 2 Sneed, NW cor. NE NW, Section 18-14-9, a twin to No. 1, at 900 feet. C. W. West and others had a rig up for No. 2 Mayes, CNL NE NE SE, Section 22-14-9. F. R. Billingsley plugged No. 1 Baker, SW cor. NW, Section 23-14-9, as a dry hole at 1,017 feet.

Hall and others shut down No. 1 Johnson, NE cor. SE SW, Section 17-14-10, for gas at 2,100 feet. The Camden Oil & Gas Co.'s No. 1 Mitchell, SW cor. NW, Section 32-14-10, was good for 277 bbls natural from sand at 3,405-12 feet. This well extended the Tuskegee Pool to the east. The Empire Gas & Fuel Co. was spudding No. 1 Fixico, NW cor. SW, Section 32-14-10.

Okmulgee County

In Okmulgee County D. D. Michelson's No. 1 Lewis, SE cor. Section 4-15-11, was good for 10 bbls., after a shot of 100 quarts in sand at 1,868-95 feet. Schock and others abandoned No. 3 Grayson, NW cor. SW SE, Section 14-15-11, at 1,867 feet. F. C. Rickow was building a rig for No. 2 Hill, NE cor SE NW, Section 26-15-11.

Ferris & Potter's No. 2 Cousins, NE cor SE NE, Section 18-15-2, was making 10,000,000 feet of gas and spraying 25 bbls. of oil from sand at 2,205-06 feet. The 6-inch was being run.

In Okfuskee County, about a mile north of the Papoose Pool, the Midwest & Gulf Oil Corp. was drilling a diagonal northwest offset to its gasser. The new test, No. 1 Barnett, C SE NE SW, Section 33-10-9, was drilling at 700 feet, with the 15-inch set at 645 feet.

South of Ada in Pontotoc County, the A. B. C. Oil Co. was drilling No. 1, C NW SW, Section 15-3-6 at 875 feet.

In southern Pawnee County, Flynn and others had a rig up for No. 1 Davis, SE cor. SW NW, Section 4-20-5.

Chandler & Kelly had a showing of oil in No. 1 Hill, NE cor. SW, Section 1-21-5, in sand at 2,470 and was drilling at 2,660 feet.

In Grant County, the Western States Oil Co. was spudding at 25 feet in No. 4-A Stewart, SW cor NE SE, Section 22-27-3w.

In Custer County, the Magnolia Petroleum Co. was drilling red beds at 1,090 feet in No. 1, NW cor. SE, Section 17-13-14w.

In Jefferson County, some new tools were being started. Ely and others had a rig up for No. 1 Brown, NW cor. SE SW, Section 4-6s-5w. Anderson & Hoggood also had a rig in place for No. 1 Seay, C SW SW NE, Section 31-6s-5w.

The Sutherland Oil Co.'s No. 1 Reed, CNL NE NW, Section 18-7s-5w, was making 37,000,000 feet of gas from sand at 647-87 feet.

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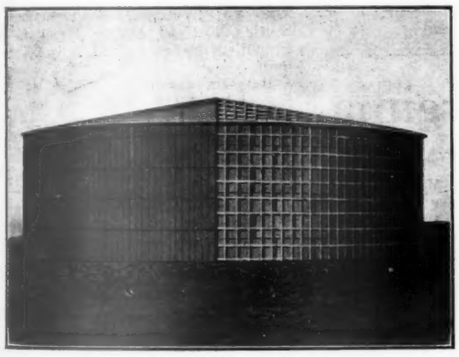

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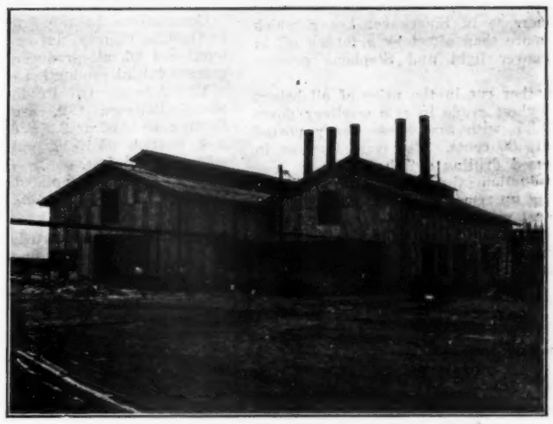

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North Louisiana-Arkansas

By M. L. Vaughn.

Decline in North Louisiana offset by increase in Cotton Valley where Woodley Petroleum Co. has well flowing 6,000 bbls., 8 per cent salt water, in heart of field. Fail to find extensions. Caldwell et al's No. 3 Hancock, Union County, swabs 800 bbls. Eason et al's No. 1 Hilton flows 500.

SHREVESPORT, La., July 28.—A slight falling off in production in a majority of the districts in the North Louisiana Field, was more than offset by the increased output of the Cotton Valley District, the daily increase of the entire field amounting to 810 barrels while the increase in runs from the Cotton Valley District averaged 1,175 barrels a day.

South Arkansas production averaged 147,085 barrels a day, a decrease of 1,500 barrels daily. El Dorado and Nevada County showing a slight decrease with an increase in Smackover heavy which was more than offset by a falling off in Smackover light and Stephens production.

Another cut in the price of oil brings the highest grade in this territory down to $1.35, with Smackover heavy posted at only 60 cents. The result is seen in decreased drilling activity.

Production throughout the field is holding up remarkably well, the runs for the past week showing a decrease of only 690 barrels a day. Production from the entire field averaged 203,475 barrels, distributed as follows:

North Louisiana	
Bellevue	4,750
Caddo light	10,600
Caddo heavy	2,500
Cotton Valley	6,775
De Soto and Red River	4,530
Elm Grove	855
Haynesville	18,655
Homer	7,725
Total	56,390
South Arkansas	
El Dorado	12,825
Nevada County	1,430
Smackover light	37,715
Smackover heavy	92,860
Stephens	2,255
Total	147,085
Total both fields	203,475
Decrease	690

Union County Completions.

Completions in the Union County area of the Smackover field during the past week numbered 18, with three failures and an aggregate initial production of 3,395 bbls.

Caldwell et al completed No. 3 Hancock, Section 25-16-16, swabbing 800 barrels at 2,088 feet.

Crawford & Sebastian's No. 7 Giller, Section 11-16-15, made a 40-bbl. pumper at 1,995 feet.

Cross et al completed No. 2 Smith, Section 13-16-18, pumping 150 bbls. at 2,105 feet.

Eason et al completed No. 1 Hilton, Section 24-16-16, flowing 500 bbls. at 2,105 feet and No. 2 Hilton in the same section flowing 350 bbls. at 2,125 feet.

The Gulf Refining Co.'s No. 2 Hedgewood, Section 13-16-15, made a 90-bbl. pumper at 2,100 feet.

The Humble Oil & Refining Co. completed No. 3 Burton, Section 25-16-16, pumping 350 barrels at 2,082 feet.

Hennebrew et al completed No. 3 Williams, Section 3-16-15, swabbing 150 barrels at 1,990 feet.

C. H. Leonard abandoned No. 1 Pendleton, Section 21-18-15, at 2,122 feet.

The Magnolia Petroleum Co. abandoned No. 1 Smith, Section 2-16-17, at 1,987 feet.

The Pure Oil Co. completed No. 5 Berry, Section 20-16-15, pumping 30 barrels at 2,090 feet, and No. 3 M. Hays, Section 21-16-15, pumping 200 barrels at 2,050 feet.

The Girrs Drilling Co.'s No. 1 Rice, Section 6-16-16, made a 125-bbl. pumper at 2,270 feet.

The Staves Oil Co. completed No. 2 Moore, Section 25-16-16, swabbing 500 barrels at 2,068 feet.

The Texas Co.'s No. 5 Hedgewood, Section 24-16-16, is flowing 400 barrels at 2,113 feet.

The Unity Petroleum Co. completed No. 1 Burton, Section 23-16-16, pumping 60 barrels at 2,034 feet.

Ouachita County Completions.

Completions in the Smackover Field, in Ouchita County, during the past week numbered 16, all producers, with an aggregate initial production of 945 bbls.

The Atlantic Oil Producing Co. completed Brierton C-2, Section 24-15-17, flowing 40 bbls. at 2,278 feet, and Wells A-4, Section 25-15-17, pumping 30 barrels at 2,292 feet.

J. E. Crosbie completed No. 1 Berry, Section 33-15-15, pumping 160 bbls. at 1,995 feet.

E. L. Farris completed No. 1 Anderson, Section 26-15-17, pumping 40 bbls. at 353 feet.

The Gilliland Oil Co. completed No. 2 McRea, Section 25-15-17, pumping 30 bbls. at 2,293 feet and No. 3, same section, pumping 30 bbls. at 2,277 feet; No. 1 W. A. Smith, Section 36-15-17, flowing 125 bbls. at 2,260 feet, Wells N-4, Section 25-15-17, flowing 45 bbls. at 2,276 feet and Wells S-2, same section, pumping 30 bbls. at 2,285 feet.

Leon et al completed No. 2 Patton, Section 32-16-16, pumping 35 bbls. at 2,255 feet.

The Palmetto Oil Co.'s No. 4, Reynolds, Section 25-15-17, made a 45-bbl. pumper at 2,299 feet.

The Phillips Petroleum Co.'s No. 5 Hearnesberger, Section 33-15-15, is pumping 200 bbls at 2,003 feet.

The Texas Co. completed No. 9 LaGrone, Section 30-15-16, pumping 75 bbls. at 2,284 feet.

White et al completed a 15-bbl. pumper in No. 5 Watts, Section 30-15-16.

Stephens Field Completions.

Ouchita County.

The Ohio Oil Co. completed No. 1 Bettis Hall, Section 31-15-19, pumping 20 bbls. at 2,165 feet.

Columbia County.

The Magnolia Petroleum Co. completed No. 1 Rinehart, Section 36-15-20, pumping 30 barrels at 2,168 feet.

Bliss & Weatherbee completed Bliss & Weatherbee F-1, Section 22-19-11 pumping 5 bbls. at 320 feet.

The Humble Oil & Refining Co.'s No. 27 Bliss & Weatherbee, Section 15-19-11, made a 10-bbl. pumper at 379 feet.

The Standard Oil Co. abandoned No. 12 Bell, Section 16-19-11, at 367 feet.

Caddo Parish.

The Dixie Oil Co. completed No. 8 Caddo Mineral Land Co., Section 22-22-15, pumping 18 bbls. at 1,618 feet.

Morehouse Parish.

W. C. Feazel completed No. 1 Eubanks, Section 16-20-5E, making 2,000,000 feet of gas at 2,240 feet.

The Natural Gas Producing Co. completed No. 4 Snyder, Section 34-20-5, making 10,000,000 feet of gas at 2,244 feet.

Ouachita Parish.

The Comos Carbon Co. completed No. 1 Fee, Section 6-19-5, making 28,000,000 feet of gas at 2,167 feet.

The Southern Carbon Co.'s No. 31 Fee, Section 31-19-5, is making 8,000,000 feet of gas at 2,233 feet.

The United O. & N. G. Co. completed No. 1 Cole, Section 36-20-4E, making 7,000,000 feet of gas at 2,178 feet.

Drilling Operations.

Ouachita County.

Drilling activity in the Smackover field shows a steady decline and at the close of the week there were only 45 drilling wells, three rigs and 18 derricks in the Ouachita County area.

Anderson et al have 2,000 feet of oil in the hole in No. 4 Fee, Section 26-15-17, and arranging to pump at 2,372 feet; Arkansas Drilling Co., arranging to test at 2,290 feet in No. 3 Reynolds, Section 24-15-17; Arkansas Invincible Oil Co. set 6-inch casing at 2,202 feet in No. 5 McRea, Section 30-15-16.

Atlantic Oil Producing Co. is rigging up to drill Brierton C-1, Section 24-15-17; derrick up for No. 4 Jeffus, Section 25-15-17, and set 6-inch casing at 2,292 feet in No. 4 Smith, Section 25-15-17. The drill stem stuck in Rowland C-1, Section 20-15-16, and in trying to pull it, pulled derrick in and it is being rebuilt.

Bray-Hawthorne is drilling at 1,980 feet in No. 1 Copenhaven, Section 13-15-17; Dr. Clark set 6-inch casing at 2,202 feet in No. 1 Schoolyard, Section 28-15-16, and Clark & Melat are drilling in rock at 2,100 feet in No. 1 Murphy, Section 4-16-15.

J. E. Crosbie set 6-inch casing at 1,930 feet in No. 3 Berry and has derrick up for No. 4 in Section 33-15-16; Findley et al are drilling at 1,870 feet in No. 1 Keller, Section 25-15-17, and Forest Oil Co. set 12½-inch casing at 60 feet in No. 4 Cramer and rigging up to drill No. 7 Cramer, Section 27-15-16.

The Gilliland Oil Co. set 10-inch casing at 80 feet in No. 4 McRea, Section 25-15-17; at 90 feet in No. 3 W. A. Smith, Section 36-15-17, and at 85 feet in Wells S-3, Section 25-15-17.

Green et al. have derrick up for a well to be drilled in the townsite of Lucann, on the La Grone lease, Section 30-15-16.

Herman & Jackson set 6-inch casing at 1,984 feet in No. 1 Shirey, Section 26-15-17; Hunt et al set 10-inch at 60 feet in No. 1 Green, Section 23-15-17, and Invaders Oil Co. has 1,000 feet of oil in hole No. 2 Hardin, Section 28-15-16, and arranging to pump at 2,300 feet.

Lee Trustee is bailing to test at 2,300 feet in No. 1 Page, Section 26-15-17; Leon et al set 10-inch casing at 68 feet in No. 3 Patton, Section 32-15-16; Magnolia Petroleum Co. has derrick up for No. 1 and No. 2 Brown, Section 26-15-17, and Majestic Smackover Syndicate set 6-inch casing at 2,268 feet in No. 3 McElroy, Section 29-15-16.

Marr Oil Corporation is drilling at 2,155 feet in No. 8 Mullins, Section 28-15-16, an old hole being deepened; Morefield et al are drilling at 700 feet in No. 1 McDaniels, Section 28-14-17, and Overwood Oil Corporation plugging back trying to cut off salt water at 2,062 feet in No. 4 Snyder, Section 34-15-16.

Simms Oil Co. set 10-inch casing at 40 feet in No. 3 Gaskin, Section 30-15-

Pennsylvania-West Virginia

By D. S. Wakenight

PITTSBURGH, Pa., July 28.—The week of development work in the eastern fields was disappointing so far as completing large wells. There were only a few better than average producers and a large number fell to the duster aggregation. West Virginia completed the usual number of gassers. In all districts there is very little new work despite the fact this is usually one of the most active months for field work. To complete and put to pumping a well in old territory costs $1 a barrel more than the present market for credit balances.

Light Wells in Evidence

Southeastern Ohio had one completion above the average and the West Virginia fields two. The Ohio producer is a shallow sander, located in Section 28, York Township, Morgan County. It is the Sun Oil Co.'s second test on the C. E. Swyster farm and produced 30 bbls. the first 24 hours after it was drilled through and shot in the Berea grit.

Drilling to Trenton Rock

In Lot 2, Licking Township, Licking County, the Pure Oil Co. has started to drill to the Trenton Rock a test on the I. B. Smith farm, 1,000 feet southwest of W. W. & A. T. Wehrle's Trenton Rock producer on their own farm. It will be a matter of considerable interest when this and two other wells in that locality reach the Trenton formation. In Lot 5, Madison Township, W. W. & A. T. Wehrle drilled their test on the O. C. McClelland farm through the Clinton sand. It is dry and has been abandoned. In Clark Township, Coshocton County, Croup & Martin's No. 7 on the B. R. Keiser farm is a light pumper in the Berea grit. In the northeast quarter of Section 30, Jackson Township, Perry County, A. J. Colgan & Co. drilled in their test on the Davis Morehead farm through the Clinton sand without finding a show of oil or gas. In Section 33, Richland Township, Fairfield County, the Chestnut Oil Co.'s No. 3 on the Catherine Wykoff farm, is a small gasser in the Clinton sand. In Section 21, Jackson Township, Knox County, the Arkansas Fuel Oil Co. has a show for an 8-bbl. pumper in the Berea grit at No. 7 on the L. V. Dugan farm.

Duster in Washington County

One mile northwest of production in Section 49, Adams Township, Washington County, Walter Wickens & Co. drilled a test on the Homer Dixon farm through the 800-foot sand. It is a duster. In Salem Township, Gertrude McClure & Co. have a very light pumper in the Buell Run sand at their No. 12 on the J. W. Haas farm. W. F. Meister & Co. got a light pumper in the first Cow Run sand at No. 18 on the Theobold Daniels farm. In the same locality, Waxler & Metcalf have a light pumper in the Macksburg 700-foot sand at No. 5, on the Jacob Gross farm. In Section 6, Monroe Township, Harrison County, Patton, Arbaugh & Getchel have a 2-bbl. pumper in the Berea grit at No. 11 on the Frank Quinn farm.

Starting New Work

In Liberty Township, Washington County, C. E. Smith & Co. have started to drill No. 4 on the Ada M. Archer farm. In Section 5, Pike Township, Perry County, the Calkins Oil & Gas Co. is drilling another test on the W. R. Calkins farm. In Hanover Township, Licking County, the Flint Ridge Oil & Gas Co. is drilling on the J. E. Armstrong farm. In Washington Township, Monroe County, the Carter Oil Co. is drilling

(Continued on Page 140)

Continued Progress

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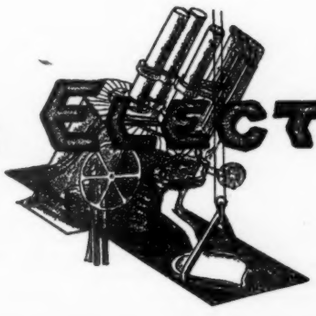

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16; Southern Oil Co., drilling at 2,215 feet in No. 1 Hoffman, Section 22-15-17; Staves et al, bailing to test 19 feet of sand at 2.325 feet in No. 2 Jeffus, Section 26-15-17, and Stumph & Todd set 10-inch casing at 42 feet in No. 3 La Grone, Section 30-15-16.

The Texas Co. has 1,500 feet of oil in hole No. 7 Stringfellow, Section 28-15-16, and setting 2-inch tubing at 2,311 feet; Whittiken et al drilling at 2,280 feet in No. 2 and at 1,750 feet in No. 3 Anderson, Section 23-15-17, and have 400 feet of oil in hole in No. 1 Shirey-Berg, Section 29-15-16, and arranging to pump at 2.318 feet.

Union County Drilling

At the close of the week there were 68 drilling wells in the Union County area of the Smackover Field.

Bradley & Cazart tested dry at 2,163 feet and at 2.163 feet and at 2,192 feet in No. 1 Miller, Section 21-17-15, and closed down waiting orders. Cherokee Petroleum Co. has four rigs running on the Burton lease and derrick up for another in Section 25-16-16.

Crawford & Segastian tested 250 000 feet of gas in No. 4 Graves, Section 3-16-15, at 2,273 feet and will probably drill deeper.

Federal Petroleum Co. tested dry at 2,262 feet in No. 2 Childs, Section 8-16-16.

Magnolia Petroleum Co., is arranging to test three feet of sand at 2,400 feet in No. 1 L. Smith, Section 2-16-17 Pure Oil Co. has 800 feet of oil in hole in No. 2 L. M. Hicks, Section 29-16-15, and is arraning to pump at 2,097 feet; has 1.400 feet of oil in No. 2 Lindsay, Section 29-16-15 and arranging to pump at 2.075 feet; fishing at 2.050 feet in No. 3 Massey, Section 17-16-15.

The Reliance Drilling Co. is running core barrel at 2,200 feet in No. 1 Meakin, Section 9-16-16. W. E. Rutledge, Trustee, has 200 feet of oil in hole in No. 1 Carruth, Section 7-16-15, and arranging to pump at 2.312 feet.

Standard Oil Co.'s No. 5 Alphin, Section 2-16-15, is standing with 1.100 feet of oil in hole at 1,973 feet and No. 1 J. S. R. Saxon, Section 4-16-16, stands full of salt water at 2,318 feet.

Cotton Valley, Webster Parish

Cotton Valley is again in the limelight with the best well yet completed in this district. The well was drilled by the Woodley Petroleum Co. on the Merritt lease in Section 14-21-10 and came in flowing 6,000 barrels at 2.552 feet. The production is practically clean oil, with only 8 per cent salt water and 2 per cent b. s. and the well is right in the heart of the producing district.

The Invincible Oil Co. put an air jammer on No. 1 A. J. Hodges, Section 11-21-10 and the well is making 200 barrels at 2,558 feet.

Efforts to extend the pool in the Cotton Valley district have not proved very successful and drilling activity is confined within a small proven area by the comparatively few operators fortunate enough to have obtained leases near production.

Belchic & Laskey are drilling in rock at 2.640 feet in No. 1 Logan, Section 2-21-10 and the Fortuna Oil Co. is drilling in chalk rocks at 2.335 feet in No. 3 L. Merritt and at 2,150 feet in No. 2 S. J. Merritt, Section 14-21-10, and has derrick up for No. 1 W. Cox in Section 15-21-10.

Gulf Refining Co. is bailing and cleaning out No. 2 A. J. Hodges, Section 11-21-10, arranging to re-test at 2,547 feet.

Hude & Aarnes made a location for No. 2 W. W. Cox, Section 22-21-10; Humble Oil & Refining Co. set 6-inch at 2,500 feet in No. 3 Babb at 2,500 feet and is setting liner to test 37 feet of sand in No. 4 Babb at 2.577 feet. Section 14-21-10; set 5-inch at 2,477 feet in No. 3 A. J. Hodges, Section 11-21-10; drilling at 2.550 feet in No. 1 Merritt and at 2,465 feet in No. 2. Section 14-21-10, and is drilling in lime at 2,100 feet in No. 1 R. D. Webb, Section 14-21-10.

Invincible Oil Co. is drilling at 1.075 feet in No. 1 Crichton, Section 21-21-10, has 1,000 feet of oil in hole in No. 4 Merritt, Section 14-21-10, and arranging to pump at 2,553 feet and drilling in rock at 900 feet in No. 1 Lindsay, Section 22-21-10.

Morefield & Tanner set 6-inch casing at 2,620 feet in No. 1 Pinewood Lumber Co., Section 2-22-11, 8 miles northwest of the Cotton Valley Pool.

The Ohio Oil Co. is drilling in chalk rock at 2,140 feet in No. 1 R. L. Hollilay; has derrick up for No. 2, Section 23-21-10, and rigging up to drill No. 1 Lindsay in Section 22-21-10. The Oil Field Gas Co. made a location for Hope Estate B-3, Section 13-21-10.

Standard Oil Co. set 6-inch casing at 2,500 feet in No. 1 McInnis, Section 22-21-10, and Woodley Petroleum Co. is drilling in rock at 2,000 feet in No. 3 Merritt, Section 14-21-10.

Caddo Parish

Caddo Western Oil Co. is reaming to the bottom at 2,865 feet in No. 1 Gardner Blades, Section 2-16-15, 7 miles west of Reisor and 5 miles northeast of Bethany.

Collins and others set 6-inch casing at 2,353 feet in No. 1 Levy Realty & Planting Co., Section 23-19-24, 8 miles south of Shreveport and half way between the Bethany and Elm Grove gas districts.

T. C. Adams and others are drilling at 710 feet in No. 1 Johnson, Section 16-14-16, 10 miles south of Bethany and about the same distance north of Logansport.

Dixie Oil Co. is drilling at 2,760 feet in No. 14 Robertshaw, Section 14-21-15, and at 150 feet in No. 62 Robertshaw, same section.

Louisiana-Texas Community Oil Co. is running core barrel at 2,925 feet in No. 1 Rodessa Oil & Land Co., Section 15-23-16, in the north end of Caddo Parish.

Gulf Refining Co. is drilling at 2,850 feet in No. 216 Ferry Lake, Section 14-20-16, and set 6-inch casing at 2.040 feet in No. 218 Ferry Lake, Section 22-20-16.

In the Hosston district Lewis Oil Corp. is drilling at 200 feet in No. 4 Caddo Mineral Land Co., Section 24-22-15.

Claiborne Parish

Practically all wells now drilling in Claiborne Parish are wildcat tests between 6 and 10 miles from the Homer and Haynesville pools.

Arnett and others are closed down for water at 1,500 feet in No. 1 Calhoun, Section 26-21-6, 5 miles east of Homer.

Block Oil & Gas Co. is temporarily closed down at 1,450 feet in No. 1 Aubry, Section 20-21-8, 9 miles west of Homer, having had a small showing of dead oil at this depth.

Dixie Oil Co. is drilling in lime at 2,220 feet in No. 1 Eastep, Section 20-20-7, 8 iles southwest of Hominy.

El Dorado Chief Oil Co. is drilling at 3,520 feet in No. 1 Gandy, Section 36-22-7, 8 miles southeast of Haynesville.

Standard Oil Co. is drilling in gumbo at 2.705 feet in No. 1 Loyd, Section 10-20-5, 10 miles southeast of Homer.

Triangle Drilling Co. is drilling at 2,685 feet in No. 1 Ferguson, Section 5-21-5, 10 miles northeast of Homer.

DeSoto Parish

Greyhound Syndicate set 10-inch casing at 200 feet in No. 1 Pollock, Section 36-21-14, a mile northwest of Logansport.

A. H. Tarver is drilling at 2,000 feet in No. 3 Matthews, Section 32-12-11, in the south end of the Bull Bayou Field.

LeGrande and others set 6-inch casing at 2,440 feet in No. 3 Fee, Section 2-14-12, 10 miles northwest of Gusher Bend.

Bienville Parish

Brooks and others have derrick up for No. 1 Davis, in Section 8-16-9.

Bossier Parish.

Atlantic Oil Producing Co.'s test on the Boldeau Lumber Co. lease in Section 24-13-12, in the north end of the parish, is standing full of fluid at 2,716 feet, 75 per cent salt water and 25 per cent oil.

Standard Oil Co. is rigging up to drill No. 6 McDade, Section 6-16-11, in the south end of the parish.

Woodley & Collins are drilling at 2,350 feet in No. 1 Hamilton, Section 16-20-11, on the north shore of Bodcau Lake.

Grant Parish

Grant Parish Petroleum Co is drilling in gumbo at 1,800 feet in No. 1 Bull, Section 1-7-1w, between Winn Field and Alexandria.

LaSalle Parish

Burban Oil Co. is drilling at 1,800 feet in No. 2 Urania, Section 21-11-2e, 5 miles north of Urania.

Gulf Refining Co. is drilling at 7[illegible] feet in Urania A-1, Section 22-11-2, 5 miles east of Urania.

Stovall Drilling So. tested salt water at 1,405 feet in No. 2 Louisiana Central Lumber Co., Section 27-10-2e, and will drill deeper. The well is located 4 miles southeast of Urania.

Urania Petroleum Co. is drilling at 550 feet in No. 4 Urania, Section 20-10-2e.

Amalgamated Oil Co. set 6-inch casing at 2,148 feet in No. 2 Southern, Section 53-20-4e; Ladel and others set 8-inch at 975 feet in No. 1 Feazel, Section 22-20-5, and Natural Gas & Petroleum Co. has derrick up for No. 13 Crossett in Section 27-21-4.

Ouachita Parish

Haynes and otners are drilling at 2,850 feet in No. 2 Dixie Lumber Co., Section 54-17-3; Ladel and others are drilling at 1,800 feet in No. 27 Fee, Section 33-20-5; Oil Field Exploration Co. is drilling at 2,150 feet in No. 1 Collins, Section 18-19-5 and Ouachita Natural Gas Co. is rigging up to drill No. 3 Trezevant in Section 40-20-4.

Southern Carbon Co. has five rigs running on Fee land in Sections 5, 15 and 21-19-5; Palmer Corp. set 8-inch at 855 feet in No. 1 Grayson, Section 12-19-4 and drilling at 1,090 feet in No. 2 Lieber, Section 4-19-5 and Standard Carbon Co. is drilling at 850 feet in No. 1 Gayle, Section 18-19-5.

The Texas Co. set 6-inch at 2,000 feet in No. 1 Ladel, Section 2-19-5 and West Virginia Oil & Gas Co. set 6-inch at 2,062 feet in No. 4 Fee, Section 4-18-5.

Union Parish

Castello and others are rigging up to drill No. 1 Nelson in Section 17-23-1w; Davidson & Palmer are drilling in lime at 2.235 feet in No. 1 Frost Johnson Lumber Co., Section 17-23-1e, and Johnson and others are drilling in shale at 1,385 feet in No. 1 Pryor Estate, Section 35-22-2w.

James and other have derrick up for No. 1 Talton in Section 14-20-3E and J. F. Palmer tested dry at 2,220 feet in No. 1 Templeton, Section 18-23-1e, drilled to 2,234 feet and have a small showing of oil.

The Texas Co. is drilling in rock at 1,785 feet in Grayling Lumber Co. B-1, Section 32-21-4e.

West Carroll Parish

Arkansas Fuel Oil Co. is drilling in lime at 1,420 feet in No. 1 Fiske, Section 8-21-10, and Orion Oil Co. tested salt water with no showing of oil or gas at 2,900 feet in No. 1 Bain Wagon Co., Section 23-23-10.

Arkansas Wildcats

Calhoun County

Arkansas Fuel Co. tested dry with a little salt water at 2,250 feet in No. 2 Childress, Section 1-15-15, and arranging to drill deeper.

Grant County

The Texas Co. is drilling in shale at 2,265 feet in No. 3 Chicago Land & Timber Co., Section 18-6-13.

Little River County

Gaines and others are drilling at 3,200 feet in No. 1 Goodrun Timber Co., Section 15-13-29, and Grote and others at 2.850 feet in No. 1 Allen, Section 2-13-31.

Nevada County

Autry Oil Co. has a fishing job at 1,155 feet in No. 2 Womack, Section 10-14-21, and Smitherman & McDonald are rigging up to drill No. 3 McKinley, same section.

Burnham and others are drilling at 1,075 feet in No. 1 Perry, Section 12-15-22; Kenark Oil Co. is drilling at 865 feet in No. 1 Hoena, Section 12-13-21, and Lockhart and others are down 150 feet in No. 1 Cornelius, Section 17-10-2.

Gulf Coast Oil Operations

By P. L. McGreal

HOUSTON, Tex., July 28.—Completions at Hull and Humble Pools and the restoration of wells in other pools resulted in an increase of 2,345 bbls. in the estimated daily average gross production of Gulf Coast pools for the week.

The gross in the southwestern fields is placed at 51,696 bbls, against 55,976 bbls last week. The estimate for each district follows:

District—	Gross Bbls.
Batson	1,535
Blue Ridge	650
Barber Hill	175
Dayton	95
Damon Mound	1.475
Edgerly (La.)	585
Goose Creek	11,750
Humble	7.875
*Hull	21.700
Jennings	550
Markham	300
Orange	9,800
Pierce Junction	350
Spindletop	980
Saratoga	1.470
Sour Lake	4,420
Vinton (La.)	5.820
West Columbia	11,700
*Miscellaneous	900
Total	82,140

*Includes Big Creek, 350 bbls.; High Island, 350 bbls.; Nacogdoches, 110 bbls.; Hockley, 30 bbls.; balance scattered.

Southwest Fields—	
Luling	43.866
Laredo	4,175
Somerset	2,450
Callihan	650
Rockdale-Minerva	555
Total	51,696

Total both divisions, 133,836, against 135,771 bbls. Decrease, 1,935 bbls.

Crude Stocks Increase

Stocks in steel and earthen storage tanks, including Luling, total approximately 15,995,112 bbls., against 14,871,421 bbls June 1 last an increase of 1,123,596bbls. More than 2,000,000 bbls. of the total is in the Luling field. Of the total, 8,540,320 bbls are in steel storage and 7,354,792 bbls. in earthen tanks. In addition there is approximately 6,700,000 bbls of light gravity crudes in storage at tank farms at Webster, Englewood, Sinco (Sinclair Co.'s tank farm), Texas City and Bayttown. The stotcks of light gravity crudes at these farms decreased about 245,000 bbls since June 1.

The amount of Gulf Coast crude alone is placed at 14,300,000 bbls, of which about 50 per cent grades as Class A. Big shippers of crude to Atlantic seaboard refineries say only about 12,000 bbls per day is being consigned to those plants at present, being replaced by Mirando (Laredo), Smackover, California and Mexican heavy gravity crudes, which are cheaper.

Completions during the week in the coastal pools number 26, of which 10 are wored over holes. The new production aggregates 7,540 bbls, Hull contributing 3,700 and the Humple Pool 3,000 bbls. of the total. Four of the completions go into the dry hole list and five were salt water wells. The Pierce Junction Pool recorded a gas well. Eight wells are bailing at the close of the week.

In the southwestern fields the wells completed totaled 32, of which two are dry and three gas wells. The new production is 1,735 bbls., the Luling Field showing 1 170 bbls.

Coastal Operations

In the Humble Pool in Harris County, the Sun Oil Co.'s No. 19 river lease, on

(Continued on Page 132)

Oil Country Iron Cocks

PROTECTION against leaks and theft is assured by the use of cocks of proper design and construction.

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Fig. 491
Essex Lock Iron Cock—Extra Heavy Pattern

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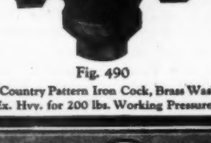

Fig. 490
Oil Country Pattern Iron Cock, Brass Washer Ex. Hvy. for 200 lbs. Working Pressure

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Wyoming Field Operations

By F. B. Taylor

Fire destroys rig at Union Oil Co.'s big gasser, Wellington Dome, Colo. Ohio Oil Co. to test lands of Colorado Fuel & Iron Co. on Wyoming-Colorado State line. Shoshone Co. well in Sunburst making 5,000 bbls. Salt Creek Field reports 21 completions. Deepest test in Rockies now being drilled.

CASPER, Wyo., July 28.—The big gasser at Wellington of the Union Oil Co. of California, caught fire from an unknown cause Wednesday afternoon and Roscoe Fisher was so seriously burned he may die. The crew was trying to put on a new control head. The rig caught at once and was consumed. The flames were shooting about 125 feet into the air and an effort to blow the flame out with explosives was unsuccessful. The Union's officials are debating whether to try and drown out the fire with water and mud or to rig up a triangle of cable for explosives.

Denver oil men are considering the matter of supplying natural gas to the city since the Union's well came in with a strong pressure. It is thought it will be a matter of only a few days or a week or two until the fire is out and the well under control and then the Union is expected to announce definitely its intentions regarding the marketing of the production of the two wells. With the second well a gasser, the opinion becomes stronger that the Wellington Dome will be found gas productive over all its area while there may be some oil also, produced along with the gas. The oil production however is considered to be a secondary matter in view of the heavy gas production indicated by the two wells.

Colorado Fuel Tests

In the Moffat Field, the Transcontinental Oil Co. drilling on the Beaver Creek structure is cementing off water found in the Frontier sand.

A new operation is scheduled to start test wells at once on the properties of the Colorado Fuel Iron Co. on the State line of Wyoming and Colorado, in Carbon County, Wyoming and Moffat County, Colorado. This structure was first noted by Professor George in one of his early surveys of the oil structures in Colorado. Recently the Iron Co. leased its lands to the Ohio Oil Co., which is now moving in equipment to start a well.

The big well of the Sunburst Field, drilled by the Shoshone Oil Co. is still holding up in the thousands of barrels production daily. The oil comes from the Ellis sand at 1,478 feet and the well is now making about 5,000 bbls. daily. The location is on Section 4-34-2 in the south end of the Sunburst Field and in the same part of the field that the Van Meer gusher was struck about two months ago.

Deepest Well in Rockies.

In the deepest well in this region being put down by the Producers & Refiners in Carbon County southwest of Medicine Bow, the casing has been set at 5,455 feet. This is the record string of pipe for any hole ever drilled in the Rockies. The well is drilling again after setting the casing and the Dakota sand is drilling again after setting the casing and the Dakota sand is looked for shortly. Should the well be found productive, the amount of oil must be large to pay for such deep drilling.

The Hatfield Oil Co. drilling on the Eight Mile Lake Dome, south of Rowlins in Carbon County, recently had a flow of gas in what was thought to be Dakota sand where the first well of this company found its gas production. It was later discovered that the gas was coming from a shell in the Mowry shale and the hole is now drilling again to the Dakota. At present the well is at 3,800 feet.

The Wyoming Illinois Co. operating in the Lost Soldier Field has announced a one percent dividend in addition to the regular dividend of 10 per cent paid quarterly by this company. The extra dividend was decided on because of the increase in earnings caused by the drilling of two more wells on the firm's property. The Wyoming Illinois made an agreement with the Producers & Refiners about a year ago by which the latter company will develop the Wyoming Illinois properties in the Lost Soldier. The result of this agreement is seen in the dividends paid by the Wyoming Illinois and the notices of this one percent dividend state that it will be forthcoming every month in the future. The production of the company is now over 1.000 bbls. daily from its Lost Soldier wells and the firm has some lands in Kansas that are considered good.

Colorado Operations

In the Colorado fields, the T. S. Hogan interests of Montana have secured leases in the Axial Basin country, about 25 miles west of the Moffat Field, and will drill a wildcat. These men came from the Sunburst Field in Montana where they met with marked success in that field and where they have considerable production.

The Texas Co. is now drilling five wells on the Craig Dome in the Moffat Field of Colorado. Three of these wells are joint holes with the Transcontinental Oil Co., which is interested in the discovery well with The Texas Co., and the other two are being drilled by The Texas Co. for its own account on leases the company owns itself.

The Transcontinental Oil Co. is also drilling one well on the same structure for its own account and the Hamilton Salt Creek is drilling one well.

The Texas Co. is also looking over some structures about 10 miles south of Hayden, in Routt County, Colo., with a view to development. This territory is now under lease to the company and the geologists are finishing their work. So far their reports are said to be good.

The Prairie Pipe Line Co. has about completed the Moffat Field pipe line from the field to the railroad near Craig. The line will be ready for oil this week it is expected, and then the discovery well will be run to capacity in order to obtain a line on the true production. This oil will go through the pipe line to the storage tanks at Craig, then by rail to refinery points in Wyoming and Colorado. As soon as some of the wells now drilling have reached the sand and an idea of the field's production is had, the Prairie plans to lay a line to Parco, Wyo., if it is considered the field will have enough production to warrant it. Such a line would be about 100 miles long and would be of 6 or 8-inch pipe.

The Mutual Oil Co. is moving in material on what is known as the Lamar structure or Twin Buttes anticline about 30 miles south of Lamar, and the geology has been reported favorably by several prominent geologists. The Mutual has made arrangements for the drilling of the first well and will share in the leases and what production is found with the original holders.

Salt Creek Completions

In the Salt Creek Field the Midwest Refining Co. completed 21 wellsfi the largest number of any week since the drilling campaign started. The Wyoming Associated, on Sec. 30-40-78, found the second Wall Creek sand at 2.260 feet, and the well is good for 25 bbls. The same firm also completed a producer good for 225 bbls., at 1,954 feet, on the same section, and on Sec. 1-39-79, the company has a producer good for 25 bbls., at 1.775 feet. On Sec. 14-40-79 ,the same company has a good well at 1,971 feet that is making 240 bbls.

The Mountain & Gulf on Sec. 12-40-79, has a 50-bbl. well at 2,593 feet, and another that will do 25 bbls., on Section 13-40-79, at 2.213 feet. The Midwest Oil Co. has a 25-bbl. producer on Sec. 39-79 at 1,944 feet, and on Section 34-40-79 at 2,189 feet, one that will make a producer after a shot. This firm has the best shale completion of the week on Sec. 27-40-79, where a shale well was struck at 1,208 feet that started off at 1,119 bbls. The Midwest Oil and Wyoming Associated found a nominal producer on the school sections 36-40-79 at 1,983 feet that will be shot and on the same section the same companies found the best well of the week at 1,721 feet that did 1,450 bbls. the first 24 hours. Another well on the same section came in a small producer of only 25 bbls. and will be shot. The Wyoming Oil Fields Co. drilled in a 25-bbl. producer on Sec. 25-40-79 at 1,553 feet and will shoot, and the Salt Creek Consolidated Oil Co. drilled in a well good for 50 bbls. at 2,136 feet on Sec. 31-40-78.

The Midwest Oil Co. on Section 22-40-79 found the second Wall Creek sand at 1,951 feet a producer that made 64 bbls. daily the first few days. On Section 23-40-79, the same firm has a good well making 265 bbls. at 1,488 feet and the Midwest and the Wyoming Associated drilling joint wells on Section 36-40-79 found a 15-bbl. well at 1,736 feet that will be shot.

The Wyoming Associated Oil Co. drilled in a well on Section 15-40-79 that will make 20 bbls. natural from 2,270 feet in the second Wall Creek sand and on Section 2-39-79 has a small producer at 1,824 feet, which will be shot. Also on Section 24-40-79 the same company found the best well of the week that started off at 680 bbls. from 1,640 feet. The Midwest Oil Co. found a small well on Section 27-40-79 at 2,030 feet and will shoot.

Runs From Fields

Salt Creek	88,650
Teapot	2,400
Big Muddy	4,025
Grass Creek	3,100
Elk Basin	1,225
Greybull	45
Byron	75
Rock River	2,500
Lance Creek	3,000
Poison Spider	600
Osage	400
Hamilton Dome	950
Mule Creek	795
Lander	320
Pilot Butte	70
Lost Soldier	6,000
Ferris	115
Cat Creek	4,135
Sunburst	4,120
Miscellaneous	625
Total	123,710

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., July 26.—After several months of inactivity, following the completion of the Canadian Oil & Refining Co.'s big gasser on Section 29-1-11w4, drilling has been resumed in the Sweetgrass district, southern Alberta. Canadian Oil & Refining Co. recently made a tentative location for No. 2 on the northwest quarter of Section 28-1-11w4, half a mile east of No. 1, planning to transfer the drilling outfit to the new site and utilize gas from No. 1 for fuel. Later the company decided to attempt to deepen No. 1. The Rogers gasser has a production of about 23,000,000 feet a day from the gas horizon at 2,528 feet, but the operators believe the gas pressure can be shut off by pumping the well full of water and cutting off the pressure, the drill being operated through the water. At last reports drilling had been resumed, the heavy gas flow shut off and the drilling carried down through the gas sand. It is now planned to test the lower formations for oil.

Imperial Oil, Ltd., will drill a new test in the same field, east of Coutts, and a short distance north of the Rogers gasser, at a point somewhat lower on the structure, where it is expected the drill will avoid the heavier gas pressure. The company is arranging to move a rotary outfit from the Irma-Wainwright field for its new test, which will likely be spudded in early in August.

It is reported the Royal Canadian Syndicate affiliated with the Sanctuary Oil Co. (Thompson syndicate), which has a test now drilling in Pakowki Lake district, will rig up shortly for an offset test to the Rogers gasser.

Lethbridge Refinery Change

The Canadian Oil & Refining Co. has taken over the Standard Refining Co. plant at Lethbridge. The Standard Refining Co. plant was completed earlier in the year and has been in operation for several months, running on Montana crude. The Canadian Oil & Refining Co. is planning to enlarge the refinery and extend the distributing system to southern Alberta.

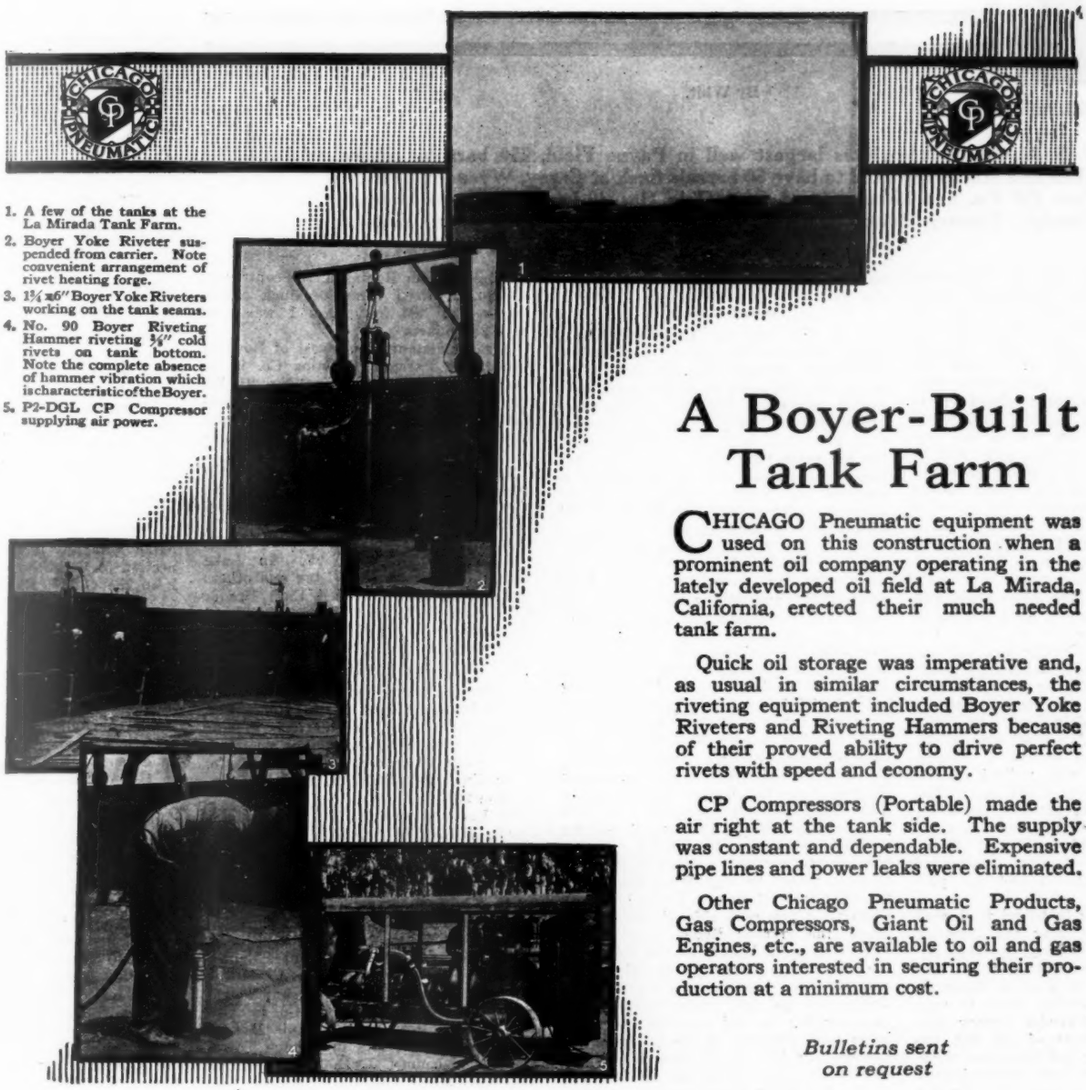
In the Sunburst-Kevin field, Montana, Canadian interests behind the Red Deer-Sunburst Oils, Ltd., are drilling Red Deer No. 1. The test is reported around 1,000 feet. The company is financed by Red Deer, Alberta, men, the officers being: President, Dr. C. T. Eline; vice president, Dr. J. R. MacCrostie; secretary, S. V. Day.

In connection with the drilling operations of the Canadian Oil & Refining Co., east of Coutts, in the Sweetgrass district of southern Alberta, Mark C. Rogers of Lethbridge, head of the company has improved on the motor transportation used for reaching the rather isolated location. On July 13 Mr. Rogers made the round trip in an airplane in charge of Jack Palmer. The trip to the well was made in 1 hour and 10 minutes and the return in 8 minutes less.

Irma-Wainwright Operations

In the Irma-Wainwright Field, east central Alberta, Maple Leaf Oil Co. No. 1, Section 24-45-8w4 is reported drilling below 1,365 feet, in a blue shale. Around 1,135 feet the drill encountered hard rock, which delayed the work. A location has been made for No. 2, but it will not start drilling till No. 1 is finished. British Petroleum No. 3, Section 29-45-6w4, is drilling at 1,800 feet and has changed to the core drill for the lower strata. No. 4 is drilling at 800 feet. Both outfits are running double

(Continued on Page 136)



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2. Boyer Yoke Riveter suspended from carrier. Note convenient arrangement of rivet heating forge.
3. 1¼ x6" Boyer Yoke Riveters working on the tank seams.
4. No. 90 Boyer Riveting Hammer riveting ¾" cold rivets on tank bottom. Note the complete absence of hammer vibration which is characteristic of the Boyer.
5. P2-DGL CP Compressor supplying air power.

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Fields of the Central West

By Whit.

U. S. A. Oil Co. completes largest well in Payne Field, 250 barrels. Riley Allen and others reported to have 50 barrels flush at Carey, Wyandot County. Pure Oil Co. has 75-barrel and East Ohio Gas 40-barrel wells in Holmes County. Trenton Rock Co. gets three good ones in Clark County, Illinois.

FINDLAY, Ohio, July 28.—A general survey of the Central West fields elicits that operators in some portions are letting up on development work, while in others there are only slight changes noticeable. The second cut in crude over Indiana, Illinois and Northwestern Ohio fields may bring about a shutdown to some extent, but so long as crude prices in the Lima Field are around the two-dollar mark, more or less wells will be drilled. There is little profit in either of the three fields at the present posted prices, and many operators are planning vacations.

Crude prices in the Lima, Indiana and Illinois fields have not been hit so hard as other Central West fields of Central Ohio and Indiana. The Lima Field will see a lot of development work, owing to the new extensions in the past few months. Paulding County has not experienced the activity it should, for a virgin field, and the bringing in of good producers. The latest completion there is the largest yet found in the Payne Field, the U. S. A. Oil Co.'s second well on the William King farm, section 4, Benton Township, reported with a flush of 250 barrels at a depth of 1,454 feet. The Shelby County Field attracts much attention, but is rather quiet at this time. The Coldwater Field, of Butler Township, near Mercer County, is another likely spot for both oil and gas production.

Reports are that a 50-barrel flush well has been drilled in near the town of Carey, in Wyandot County, by Riley Allen and others of Jamestown, N. Y., and if this well proves as good as reported, may bring about further work in that area. Years ago Wyandot County produced a large amount of oil, but the wells decline rapidly and since then nothing but failures have been recorded until the Carey well was brought in. Hardin county is another spot being closely watched, since the test drilled by Schmidt & Holmes on the Kevi Coneroy, Section 14, Marion Township, and right at the town of McGuffey, came in for 20 barrels flush.

Shelby County.

Considerable activity exists around the new Cynthian Township, Shelby County Field, a new addition to the Lima Field to the south. Several new wells are due for completions and a number of widcats are under way. Schlagel & Johnson drilled in No. 1 H. F. Holscher farm, Section 16, and reported making better than 1,000,000 feet of gas and spraying some oil. The Cashdollar Oil Co.'s No. 1 Seigel, Section 15, is showing some oil and about 200,000 feet of gas.

McClure & Marshall have started drilling a wildcat well 2 miles south of the hamlet of Newport, on the Perry Moyer farm, and have started a test a few miles east of Newport near the village of Hardis on the H. Wagoner farm, in Turtle Creek Township. Eilerman Brothers are drilling No. 3 on the Anna Eilerman farm, in Cynthian Township.

Additional wildcat wells are about to start and it looks as though a field of considerable size is being developed. Fort Laramie seems to be the center of activity. Nearly three townships of Shelby County have been leased up solid and it is rumored on good authority a new gas line will be laid soon to the new gas wells.

Wood County.

In an auto trip over the Wood County fields, it looks as though all the abandoned territory drilled years ago is to be revived. In the early days the wells were drilled less than 100 feet in the sand, owing to the heavy saltwater pressure that prevailed, but after steady pumping for years the bulk of this water has become exhausted, and deeper drilling is resorted to. Much cleaning out of old holes is under way. The H. L. P. Oil Corporation is cleaning out a number of wells on the Meeker Farm, just northwest of Cygnet along the Dixie Highway. So far three wells have been cleaned out and will make commercial wells, and the fourth, drilled more than 20 years ago and recently abandoned, is now being cleaned out and drilling deeper. When the writer visited the well recently, the drill had reached a depth of around 115 feet in the Trenton and encountered fairly good showings below the more shallow pays. This lease in the days of Wood County's boom, was owned by the Delaney Brothers, and many gushers were found upon the 80 acres. This lease is what is known as the "Sucker Rod Belt" or "Hog's Back," an anticline starting near Findlay, passing through the northern portion of Hancock County, thence through Wood County to the Waterville-Monclova Fields of Lucas County. Upon each side of this "Hog's Back" the Trenton dipped quite rapidly into what were known as the trough of the salt water belts. These salt water troughs later proved excellent oil producers, as the salt water with steady pumping day in and day out for many years took the bulk of the water to the surface, and it is in the west side dip of the Hog's Back that Ike Shuler and others had their best success in finding production some years ago.

The Ohio Oil Co. is drilling No. 18 on the R. A. Hughes farm, Section 6, Bloom Township, Wood County and at the southern edge of the town of Cygnet. Just at the north edge of Cygnet, on the Loose-Walbridge farm, same section, the Cygnet baseball grounds, the Western Ohio Oil Co. is drilling No. 3 well. The casing was set at over 900 feet, but cavings were found below and much trouble is had in trying to shut off this cavy formation.

Wells Near Cygnet

The H. L. P. Oil Corporation's second well on the Steen farm, Section 36, Liberty Township, along the Dixie Highway, a short distance northwest of Cygnet, struck top of Trenton at 1,185, struck first pay at 40 feet in and a nice gas showing at 115 feet in. The drill when visited by the writer had reached a depth of 1,400 feet or 215 feet in the sand and still going deeper. No. 1 on this farm, owned by the same company, a recent completion, a location southward from No. 2, struck top of Trenton 1,161 feet and drilled to 421 feet in the sand to 1,582 feet. This well has been equipped fields may bring sbuot a shutdown to water producer with a very good oil showing and will make a producer when the water has been bested by the pump. When these wells go on oil they are dependable pumpers for years to come. According to John Robinson, the contractor on No. 2 Steen farm, 6⅝-inch casing was set at 385 feet. No. 1 was shot with 280 quarts.

A short distance southwest of Bowling Green, the Paragon Refining Co. is reported nearing the sand at No. 21 Eli Stockwell farm, section 2, Liberty Township. In Section 21, same township, Mrs. Clarence Potter drilled a dry hole in No. 20 on her own farm.

In Montgomery Township, Wood County, Henry O. Cordrey abandoned Nos. 1 and 2 Jessie L. Crowfoot farm, Section 7. In Freedom Township, the Ohio Oil Co. is starting No. 22 A. H. Bruning farm, Section 27. In Lake Township, Charles F. Zeising and others are drilling Nos. 3 and 4 Emil Brendt farm, Section 36, and Lantz, Gregg and Schulte are drilling No. 5 Henry Schulte farm, Section 35.

Lima Districts.

In Marion Township, Hancock County, the Differential Steel Casting Co.'s well on the W. C. Coy, section 7, is a light gas well with a 40-pound rock pressure. In Portage Township, the Ohio Oil Co. is drilling No. 12 R. A. Cooper farm, Section 22.

In Eagle Township, Hancock County, Porter & Hovis' No. 13 Lem Aurand, Section 5, pumped 50 barrels. In Union Township, Ewing & Montgomery's No. 9 Henry Deed's, Section 12, pumped 12 barrels, and the same firm is drilling No. 8 Flick heirs, Section 12. The Ohio Oil Co. is drilling No. 2 J. A. Rogers, Section 32, and Harpst Brothers drilled in a 10-bbl. pumper in No. 15 Henry Schwinn, Section 1. In Pleasant Township, the Bath Townsite Oil Co. is drilling a second test on the Annie Henery farm, Section 14, and in Orange Township, same county, J. B. Sawmiller and Son abandoned Nos. 4, 6 and 7 Dan Matter farm, Section 31.

In Woodville Township, Sandusky County, D. Molyard's No. 3 George F. Sandwich farm, Section 16, pumped 15 barrels. The Interstate Operating Co. is drilling No. 9 Ed Overmeyer, Section 27. In Washington Township, the Van Vleck Stowe Oil Co. abandoned Nos. 3, 4 and 5 Lewis Driftmyer farm, Section 19. In Madison Township, the Zorn-Hornung Oil Co. pulled out Nos. 1 and 4 on Fee land, Section 24, and in Sandusky Township, the Paragon Refining Co. did the same with Nos. 1, 2, 3, 4, 5 and 6 Lewis Wilhelm, Section 17.

In Gibson Township, Mercer County, the Logan Oil Co.'s second well on the J. Brunswick, Section 24, pumped but one barrel. In Washington Township, the Indian Oil Co.'s No. 1 on the southwest corner of the Dan Spriggs, Section 4, pumped 2 barrels.

In the Elmore Field, in Harris Township, Ottawa County, Fox and others' test on the southwest corner of the A. J. Weis, Section 18, pumped 8 barrels at 1,309 feet, and drilling No. 1 John B. Netcher farm, same section. The Zorn-Hornung Oil Co.'s No. 9 Belle Clay farm, Section 20, pumped 12 barrels. Elmore Oil and Gas Co. is drilling No. 3 Albert Weis, Section 17, and Gust Magisg & Sons are drilling No. 1 W. E. Stewart, Section 23.

The Indiana field failed to report any completions.

The second best oil completion for the week in the Central Ohio Field, was made by the East Ohio Gas Co., in a second test on the George Galley, Section 11, Hardy Township, Holmes County, showing for 40 barrels. In Prairie Township, same county, the Pure Oil Co.'s No. 1 William H. Miller farm, Section 18, is credited with 75 barrels from the Clinton sand. The East Ohio Gas Co. made a location for No. 1 on the Wayne F. Kimball 74-acres, Section 17, same township, while the Pure Oil Co. started drilling No. 1 Marquis, Section 17.

In Knox County, Brown Township, the East Ohio Gas Co.'s No. 13 John Sniveley 90-acres, Section 34, shows for 4 barrels, and the same company made a location for No. 1 on the Allen Scholes 33-acres, Section 30. In Jefferson Township, the Upham Gas Co. is drilling No. 2 Bruce Hobbs, Section 15, and in Brown Township, the same company is drilling No. 5 J. J. and S. Haire 62-acres, Section 6. In Clay Township, Bell Brothers' No. 1 Walter Grief, Section 17, is a light gas well, while the Logan Gas Co.'s No. 5 B. F. Baird, Section 18, shows for 6 bbls.

In Ashland County, Orange Township, the Logan Gas Co.'s No. 5 William Monteith 160-acres, Section 8, is a very nice gas well. Same company made a location for No. 1 on the Jacob Singer 60-acres, Section 5. In Greene Township, the same company is drilling a test on the Martha Brown 120-acres, Section 28. Same company No. 1 C. E. Ritchie, Section 5, Vermillion Township, and No. 1 on the G. W. Black 36-acres, Section 33, Mohican Township.

In Litchfield Township, Medina County, the Logan Gas Co. is starting the drill at No. 2 Frank Walter, Lot 58, and drilled in a light gas well at No. 1 John E. Kennedy farm, Lot 56. Same company made a location for No. 1 on the Jesse Smith 139-acres, Section 29, Westfield Township. Same company has an exceptionally good gas well at a test on the William Haring, Section 6, York Township, Media County.

In Wayne Township, Wayne County, the Logan Gas Co. has an above the average gas well at a test on the Christ Schann, Section 6, and the Ohio Fuel Gas Co. is drilling No. 2 on the Charles Pressler 84 acres, Section 5.

In Cannan Township, Wayne County, Butler Brothers' No. 1, on the Daniel Wiles 40 acres, Section 21, pumped 16 bbls. Daugherty Brothers are drilling a second test on the F. A. & M. Snell, Section 28. Logan Gas Co. made a location for No. 2 Cora and V. C. Bowman 54 acres, Section 5, and the Ohio Fuel Gas Co. a olcation for No. 2 on the S. Wonsettler 81 acres, Section 16.

In Carthage Township, Athens County, the Logan County Gas Co. has a very nice gas well in No. 4 on the Arthur Cole 83-acres, Section 4, and the Jay Oil and Gas Co. a light gas well in No. 2 E. Bailey, Section 5, at a depth of 963 feet.

Illinois Field.

The Stray sand field of Martinsville Township, Clark County, shows the good Illinois producers for the week. In this field the Trenton Rock Oil Co. brought in three producers. Its No. 7 on the southeast corner of the E. R. Auld, Section 30, pumped 75 barrels from the Stray sand at 1,410 feet. No. 5 S. W. McClelland, Section 30, 600 feet from the north line and 200 from the west line of the farm, pumped 45 barrels from 1,393 feet, while No. 1 William Howard, same section, pumped 65 bbls. from 1,418 feet.

In Johnson Township, Clark County, the First National Bank of Parkersburg drilled a dry hole in No. 5 on the northeast corner of the Joseph Claypool, Section 12, No. 6 came in for a light gas well at 623 feet, while the dry hole was found at 532 feet.

In Bond Township, Lawrence County, the Peoples Banking and Trust Co.'s No. 2 W. B. Fitch, Section 3, pumped 3 barrels at 896 feet.

Operators are anxious to go ahead with development work in the Weir sand

(Continued on Page 116)

here comes Lucey!

here comes Lucey!

here comes Lucey!

here comes Lucey!

Crude Oil Price Changes in all Oil Fields

General Advance Early in Year Due to Favorable Outlook Turned to Weakness as Production Failed to Decline

The first six months of 1924 witnessed a general advance in crude oil prices in all important fields of the United States and Mexico. Crude prices after a gradual decline over the greater part of 1923 began to advance in some fields in December of that year. Other fields shared in the upward trend soon after the opening of the new year. Most of the advances were in January and early February but scattered increases occurred as late as March.

The advances were due to an improvement in the general crude situation the latter part of 1923. The California fields and the Powell field of Texas whose large flush production were responsible for the lower prices of 1923, had started definitely to decline before the end of the year and with no large pools in sight the higher prices early in 1924 resulted.

The decline in crude production however, failed to develop as fast as expected. The lowest point so far this year was reached about the middle of January. Although there have been periods of decline since that time the general trend has been upward. This fact conpled with a situation in which gasoline consumption was below expectations the first three months of the year, due to weather conditions, stopped further crude price advances and brought a general weakness which continues up to the present time. The first important decline in crude prices as a result of this weakness occurred on May 10 when Pennsylvania crudes were reduced 25 cents. Before July 1 other scattered breaks were announced although the half year ended with no general reductions in the Mid-Continent, California, Gulf Coast, Wyoming and Montana, and Middle Western fields.

The price trend resembles in several respects developments the first six months of 1923. In that year prices advanced the first part of the year with a weakness soon apparent which brought generally lower prices before the half year was over. Following is given the chronological changes the first six months of 1924 together with tables covering prices which were in effect on January 1 with all subsequent changes up to July 1:

January 2—Ohio Oil Co. advanced Lima, Indiana, Illinois, Princeton, Plymouth, Waterloo and Wooster crudes 10 cents. Imperial Oil, Ltd., advanced Canadian crudes 10 cents.

January 7—Joseph Seep Purchasing Agency advanced Pennsylvania oil in New York Transit and Bradford oil in National Transit lines 15 cents. Corning crude advanced 15 cents.

January 9—Prairie Oil & Gas Co. adopted the scale of four schedules made effective by The Texas Co. in Oklahoma, Kansas and North Texas December 27, and advanced The Texas Co. prices established at that time, 10 cents. Change met by all major purchasing companies with the exception of the Humble Oil & Refining Co. and the Magnolia Petroleum Co. The latter company met the Prairie prices on all grades above 33° gravity and advanced its quotation on 31° to 32.9, 10 cents.

January 10—Joseph Seep Purchasing Agency advanced Pennsylvania crudes 25 cents, Cabell crude 15 cents, Somerset crude 20 cents and Somerset light 25 cents. Premiums on Somerset crudes produced after October 1, 1922, discontinued. Ohio Oil Co. advanced Lima, Indiana, Illinois, Princeton, Plymouth, Waterloo and Wooster crudes 20 cents. Canadian crudes advanced 20 cents. Standard Oil Co. of Louisiana advanced crudes in Louisiana and Arkansas 10 cents with exception of Bellevue, where the advance was 25 cents. Ohio Oil Co. advanced Grass Creek light, Elk Basin, Greybull Torchlight and Lance Creek crudes 45 cents, Big Muddy 40 cents, Rock Creek 50 cents and Mule Creek 25 cents. Midwest Refining Co. advanced Salt Creek Field 40 cents. Other Wyoming and Montana fields advanced from 25 to 45 cents, except Sunburst, where no change was made. Humble Oil & Refining Co. met Prairie Oil & Gas Co. prices in North Texas. Same company advanced Gulf Coast crudes 25 cents and posted $1.50 for Currie and $1.35 for Powell and Mexia crudes. Magnolia Petroleum Co. advanced Corsicana light to $1.35. These advances met by major purchasing companies. Atlantic Oil Producing Co. posted new scale of four schedules for Stephens, Ark., crudes. Indian Refining Co. posted $1.66 for Western Kentucky light and $1.46 for Western Kentucky heavy; Paragon Development Co. posted price of $1.60 for Warren and Simpson County (Kentucky) crudes and $1.80 for Cumberland and Monroe County crudes.

January 11—Gulf Refining Co. advanced its Grade A Gulf Coast crudes to $1.50 and Grade B $1.25. Other major purchasing companies met these prices either on this date or January 10, when the advance was first made effective by the Humble Oil & Refining Co.

January 14—Joseph Seep Purchasing Agency advanced highest grade Pennsylvania crudes 10 cents. Corning advanced 10 cents. Humble Oil & Refining Co. posted price of $1.40 for Powell and Mexia crudes.

January 15—Magnolia Petroleum Co. advanced Corsicana light crude to $1.40.

January 19—Prairie Oil & Gas Co. advanced Oklahoma, Kansas and North Texas crudes of below 33° and 33° to 35.9° gravities 15 cents; 36° to 38.9° gravity 20 cents, and 39° and above gravity, 25 cents. Change met by all purchasing companies with the exception of the Magnolia Petroleum Co., which met the Prairie prices on crude above 33° gravity and advanced under 28° and 28° to 30.9° gravities 25 cents, and 31° and 32.9° gravity, 15 cents. Magnolia Petroleum Co. also advanced Corsicana heavy crude 25 cents, Corsicana light and Mexia crudes 20 cents. Seep Purchasing Agency advanced all grades of Pennsylvania crudes 25 cents. Cabell, Somerset light and Somerset medium crudes 15 cents. Ragland crude was advanced 5 cents; Indian Refining Co. advanced western Kentucky light and heavy crudes 15 cents. Paragon Development Co. advanced Warren, Simpson, Cumberland and Monroe County, Kentucky, crudes 15 cents. Humble Oil & Refining Co. advanced Powell, Tex., crude 20 cents, and Currie, Tex., crude 25 cents.

January 21—Standard Oil Co. of Louisiana advanced north Louisiana and Arkansas crudes 15 cents. Atlantic Oil Producing Co. advanced Stephens County, Arkansas, crude 15 cents. Ohio Oil Co. advanced Elk Basin, Greybull and Torchlight, Grass Creek light and Lance Creek crudes 15 cents, Rock Creek crude 20 cents and Big Muddy 25 cents. Midwest Refining Co. advanced Salt Creek 20 cents. Osage and Cat Creek crudes were advanced 15 cents. Ohio Oil Co. advanced Lima, Idiana, Illinois, Princeton, Plymouth, Waterloo, and Wooster crudes 10 cents. Imperial Oil, Ltd., advanced Canadian crudes 10 cents.

January 22—Standard Oil Co. of California advanced all grades of California crudes 25 cents.

January 25—Humble Oil & Refining Co. advanced Gulf Coast crudes 15 cents. Other companies met this advance on the same day or the day following. Seep Purchasing Agency advanced all grades of Pennsylvania crude, Somerset light and medium crudes 25 cents, Corning and Cabell crudes 15 cents and Ragland crude 10 cents. Indian Refining Co. advanced Western Kentucky light and heavy crudes 25 cents. Paragon Development Co. advanced Warren, Simpson, Cumberland and Monroe Counties (Ky.) crudes 25 cents.

January 30—Joseph Seep Purchasing

CRUDE OIL PRICE CHANGES FIRST SIX MONTHS OF 1924

OKLAHOMA, KANSAS AND NORTH AND CENTRAL TEXAS

	January 1	January 9	January 19	Feb. 2	March 8	May 10	June 6
Prairie Oil & Gas Co.:							
Below 33	.75	Below 33	1.00	1.15	Below 30	1.15	1.25	....	....	....
33 to 39.9	1.00	33 to 35.9	1.25	1.40	30 to 32.9	1.30	1.45	....	....	....
40 and above	1.25	36 to 38.9	1.40	1.60	33 to 35.9	1.60	1.75	....	....	....
		39 and above	1.50	1.75	36 to 38.9	1.85	2.00	....	....	....
					39 and above	2.00	2.25	....	....	....

	January 1	January 9	January 19	Feb. 2	March 8	May 10	June 6	
Magnolia Petroleum Co.:								
Below 28	.50	....	.75	1.00	1.00	1.00	.90	....
28 to 30.9	.75	....	1.00	1.15	1.20	1.15	1.00	....
31 to 32.9	.90	1.00	1.15	1.30	1.45	1.30	1.10	....
33 to 35.9	1.15	1.25	1.40	1.60	1.75	1.60	1.35	....
36 to 38.9	1.30	1.40	1.60	1.85	2.00	1.75	36 and above	1.50
39 and above	1.40	1.50	1.75	2.00	2.25	2.00	....	....
The Texas Co.:								
Below 33	.90	Same as Prairie		Prairie	Prairie	Prairie		
Above 33 same as Magnolia.								
*Humble Oil & Refining Co.:								
Below 30	.90	Same as Prairie Jan. 10		Prairie	Prairie	Prairie		
30 to 32.9	1.00							
Above 33 same as Magnolia.								

*Humble Oil & Refining Co met Magnolia's schedule on May 10, but on May 19 rescinded its action

	January 1	10	14	15	19	Feb. 2	March 8	May 10	June 6
Thrall	1.00	....	....	....	....	....	....	....	....
Corsicana light	1.25	....	....	1.40	1.60	1.85	2.00	•1.75	•1.50
Corsicana heavy	.50	....	....	....	.75	1.00	....	....	•.90
Mexia	1.25	1.35	1.40	....	1.60	1.85	2.00	•1.75	•1.50
Currie	1.25	1.50	....	....	1.75	2.00	2.25	....	....
Powell	†1.00	1.35	1.40	....	1.60	1.85	2.00	•1.75	....
Humble Oil & Refining Co.:									
Currie	1.35	‡1.50	....	....	1.75	2.00	2.25	....	....

•Magnolia Petroleum Co. only major purchaser which adopted these prices.
†Posted price of Magnolia Petroleum Co. The Texas Co. and several other purchasers were paying $1.25 for Powell at beginning of year.
‡Humble Oil & Refining Co. changes in Currie, Mexia and Powell crudes became effective January 9.

NORTH LOUISIANA AND ARKANSAS
(Standard Oil Co. of Louisiana)

	January 1	10	21	Feb. 6	March 11	April 3	June 10	14
Caddo—								
Below 32	.90	1.00	1.15	1.35	1.50	....	....	....
32 to 34.9	1.05	1.15	1.30	1.50	1.65	....	....	....
35 to 37.9	1.15	1.25	1.40	1.60	1.75	....	....	....
38 and above	1.25	1.35	1.50	1.70	1.85	....	....	....
Homer—								
Below 31	.90	1.00	1.15	1.35	1.50	....	....	....
31 to 32.9	1.05	1.15	1.30	1.50	1.65	....	....	....
33 to 34.9	1.15	1.25	1.40	1.60	1.75	....	....	....
35 and above	1.25	1.35	1.50	1.70	1.85	....	....	....
Haynesville—								
Below 33	1.05	1.15	1.30	1.50	1.65	....	....	....
33 and above	1.15	1.25	1.40	1.60	1.75	....	....	....
Bull Bayou—								
32 to 34.9	.90	1.00	1.15	1.35	1.50	....	....	....
35 to 37.9	1.05	1.15	1.30	1.50	1.65	....	....	....
38 and above	1.20	1.30	1.45	1.65	1.80	....	....	....
•Smackover—								
Below 24	.85	.85	.80	1.00	....	....	.85	....
24 to 24.9	.65	.75	.90	1.10	....	....	.95	....
25 to 25.9	.75	.85	1.00	1.20	....	....	1.05	....
26 and above	.90	1.00	1.15	1.35	....	....	1.20	....
El Dorado—								
Below 33	1.15	1.25	1.40	1.60	1.75	....	....	....
Above 33	1.25	1.35	1.50	1.70	1.85	....	....	....
De Soto	1.25	1.35	1.50	1.70	1.85	....	....	....
Crichton	1.05	1.15	1.30	1.50	1.65	....	....	....
Bellevue	.90	1.15	1.30	1.55	....	1.75	....	....
Cotton Valley	....	....	....	....	....	....	....	1.90

•On March 24 The Texas Co. reduced Smackover below 24 15 cents and higher gravities 10 cents. On April 18 the same company returned to the same price schedule as the Standard Oil Co. of Louisiana except below 24 for which it continued to pay 85 cents. On May 19 the Atlantic Oil Producing Co. reduced Smackover below 24 15 cents, the same as The Texas Co. was paying at that time.

WYOMING AND MONTANA

	January			Feb.		Feb.	Mar.
	1	10	21	4	5	16	10
Rock Creek	.60	1.10	1.30	....	1.55	....	1.70
Big Muddy	.45	.85	1.10	....	1.35	....	1.50
Mule Creek	.45	.70	....	....	.95	....	1.10
Grass Creek	.95	1.40	1.55	....	1.80	....	1.95
Elk Basin	.95	1.40	1.55	....	1.80	....	1.95
Lance Creek	.90	1.35	1.50	....	1.75	....	1.90
Osage	.90	1.35	1.50	....	1.75	....	1.90
Cat Creek	.95	1.40	1.55	....	1.80	....	1.95
Salt Creek	.60	1.00	1.20	1.45	....	....	1.60
Greybull-Torchlight	.95	1.40	1.55	....	1.80	....	1.95
Hamilton Dome	.52½	.92½	....	....	1.40	....	1.55
Sunburst	.70	....	....	....	.95	....	1.05
Lost Soldier	....	....	....	....	....	1.16	1.28

MIDDLE WESTERN STATES AND CANADA

	January				Feb.	Mar.
	1	2	10	21	4	8
Lima	1.53	1.63	1.83	1.93	2.13	2.28
Wooster	1.40	1.50	1.70	1.80	2.00	2.15
Illinois	1.32	1.42	1.62	1.72	1.92	2.07
Indiana	1.33	1.43	1.63	1.73	1.93	2.08
Princeton	1.32	1.42	1.62	1.72	1.92	2.07
Plymouth	.70	.80	1.00	1.10	1.30	1.45
Waterloo	.80	.90	1.10	1.20	1.40	1.55
Petrolia, Canada	1.93	2.03	2.23	2.33	2.53	1.68
Oil Springs	2.00	2.10	2.30	2.40	2.60	1.75

KENTUCKY

	January				March	May			June	
	1	10	19	25	30	11	1	10	27	14	16
Western Kentucky light	1.46	1.66	1.81	2.06	2.21	2.36	....	2.05	*36 and above.... 2.05	....	1.75
Western Kentucky heavy	1.26	1.46	1.61	1.86	2.01	2.16	....	1.85	33 to 35.9 ..... 1.95	....	1.65
Warren and Simpson Counties	1.46	1.60	1.75	2.00	2.15	2.30	2.36	2.05	Below 33 ..... 1.85	....	1.55
Cumberland and Monroe Counties	1.61	1.80	1.95	2.20	2.35	2.50	....	2.25	....	2.00	....

*Change on May 27 applied to Western Kentucky light and heavy and Warren and Simpson Counties.

MEXICO

Prices on Mexican crude are not posted but are based on contracts. The dates of changes as given in the table below refer to the first issue of The Oil and Gas Journal in which they appeared.

	Jan.	February		March	May	June		
	1	21	28	20	1	5	12	19
*Tuxpam (Mexican ports)	.80	....	....	1.10	1.30	1.40	....	....
†Panuco (Mexican ports)	.65	....	....	.85	1.05	1.15	....	....
Tuxpam (New York	1.31	1.50	1.55	1.85	2.20	2.12	2.05	1.97
Panuco (New York)	1.06	1.25	1.30	1.60	1.71	1.72	1.65	1.57
*Plus tax of	.2669	....	....	.257	.292	.3192	....	....
†Plus tax of	.1668	....	....	.157	.165	.174	....	....

EASTERN STATES

	January						Feb.	March	May	June	
	1	7	10	14	19	25	30	13	10	14	16
Penna grade oil in New York Transit lines	3.25	3.40	3.65	3.75	4.00	4.25	4.50	....	....	4.25	3.75	....
Bradford district oil in National Tran. lines	3.25	3.40	3.65	3.75	4.00	4.25	4.50	....	....	4.25	3.75	....
Penna grade oil in National Transit lines	3.00	....	3.25	....	3.50	3.75	4.00	....	....	3.75	3.25	....
Penna grade oil in S. W. Pa. Pipe Line lines	3.00	....	3.25	....	3.50	3.75	4.00	....	....	3.75	3.25	....
Penna grade oil in Eureka Pipe Line lines	3.00	....	3.25	....	3.50	3.75	4.00	....	....	3.75	3.25	....
Penna grade oil in Buckeye Pipe Line lines	3.00	....	3.25	....	3.50	3.75	4.00	....	....	3.75	3.25	....
Cabell grade oil in Eureka Pipe Line lines	1.45	....	1.60	....	1.75	1.90	2.05	....	2.15	1.95	1.70	....
Corning grade oil in Buckeye Pipe Line lines	1.40	1.55	....	1.65	....	1.80	....	1.95	....	2.15	....	1.90
Somerset medium oil in Cumb'l'd P. L. lines	1.40	....	1.60	....	1.75	2.00	2.15	....	2.30	2.05	1.80	....
Somerset light oil in Cumberl'd P. L. lines	1.55	....	1.80	....	1.95	2.20	2.35	....	2.50	2.25	2.00	....
Ragland grade oil in Cumberland P. L. lines	.85	....	....	....	.90	1.00	....	....	1.10	....	1.00	....

CALIFORNIA

	January			Feb'y
	1	22	5	
14 to 19.9	.60	.85	1.00	
20 to 20.9	.61	.86	1.01	
21 to 21.9	.62	.87	1.02	
22 to 22.9	.63	.88	1.03	
23 to 23.9	.64	.89	1.05	
24 to 24.9	.65	.90	1.07	
25 to 25.9	.66	.91	1.10	
26 to 26.9	.67	.92	1.13	
27 to 27.9	.68	.93	1.16	
28 to 28.9	.69	.94	1.19	
29 to 29.9	.70	.95	1.22	
30 to 30.9	.71	.96	1.25	
31 to 31.9	.72	.97	1.28	
32 to 32.9	.73	.98	1.31	
33 to 33.9	.74	.99	1.34	
34 to 34.9	.75	1.00	1.37	
35 and above	.76	1.01	1.40	

STEPHENS, ARK.
(Atlantic Oil Producing Co.)

	January			Feb.
	1	10	21	6
26°-27.9°. .90	Below 23°.	.65	.80	1.00
28°, above .95	23° to 25.9°	.85	1.00	1.20
	26° to 27.9°	1.00	1.15	1.25
	28°, above.	1.05	1.20	1.40

GULF COAST

	January			Mar.	April
	1	10	25	20	1
Grade "A"	1.25	1.50	1.65	1.80	2.00
Grade "B"	1.00	1.25	1.40	1.50	1.70

Change by Humble Oil & Refining Co. became effective January 9.

LULING
(Magnolia Petroleum Co.)

January	February	May
19	4	10
.75	1.00	.75

LAREDO
(Magnolia Petroleum Co.)

January	February	May
22	2	10
.75	.80	.75

Note—Texpata Pipe Line Co. posted price of 65 cents for Laredo districts. Same company met Magnolia posted schedule of February 2.

ROCKDALE-MINERVA
(Owens Refining Co.)

Jan.		Feb.		Mar.	May
3	22	6	21	3	10
1.00	1.35	1.60	2.00	2.25	1.80

Note—Changes on March 3 and May 10 applied to crude of 39 gravity and above.

Agency advanced all grades of Pennsylvania crude 25 cents, Somerset crudes, medium and light, 15 cents.

January 30.—Indian Refining Co. advanced Western Kentucky light and heavy crudes 15 cents. Paragon Development Co. advanced Warren, Simpson, Cumberland and Monroe County (Kentucky) crudes 15 cents.

February 2—Prairie Oil & Gas Co. announced a 5-gravity schedule for Oklahoma, Kansas and North Texas crudes with a price advance of from 15 to 25 cents on all schedules above 30 degrees gravity. Changes met by other purchasing companies. Magnolia Petroleum Co. for the same area advanced its 5-gravity schedule from 15 to 25 cents. Same company advanced Corsicana heavy and light and Mexia crudes 25 cents. The Texas Co. advanced Currie crude to $2.

February 4—Ohio Oil Co. advanced Lima, Indiana, Illinois, Princeton, Plymouth, Waterloo and Wooster crudes 20 cents. Midwest Refining Co. advanced Salt Creek crude 25 cents. Canadian crude advanced 20 cents.

February 5—Standard Oil Co. of California advanced California crudes, all fields, from 15 to 39 cents. Ohio Oil Co. advanced Elk Basin, Grass Creek light, Big Muddy, Rock Creek, Mule Creek, Greybull and Torchlight, Lance Creek and Sunburst crudes 25 cents. Cat Creek advanced 25 cents.

February 6—Standard Oil Co. of Louisiana advanced all grades of North Louisiana and Arkansas crudes 20 cents except Bellevue, which was advanced 25 cents.

February 13—Corning crude advanced 15 cents.

March 8.—Prairie Oil & Gas Co. advanced Mid-Continent crudes 10 to 25 cents per bbl. Changes were met by other purchasing companies. Magnolia Petroleum Co. advanced 28 to 30.9 gravity grade 5 cents and 31 to 32.9 grade 15 cents, metting Prairie prices on three higher grades for same area. The same company advanced Corsicana light and Mexia crudes 15 cents. The Humble Oil & Refining Co. advanced Currie crude 25 cents. The Ohio Oil Co. advanced crudes of the Central West 15 cents. Imperial Oil., Ltd., advanced Canadian crudes 15 cents.

March 10—Paragon Development Co. advanced Warren, Simpson, Cumberland and Monroe County, Kentucky crudes 50 cents. Joseph Seep Purchasing Agency advanced Corning crude 20 cents and advanced Cabell and both Somerset grades 15 cents; Ragland crude was advanced 10 cents. The Ohio Oil Co. and Midwest Refining Co. advanced Wyoming and Montana crudes 15 cents, except Sunburst, Mont., and Greybull and Torchlight crudes 10 cents.

March 11—The Standard Oil Co. of Louisiana advanced the various grades of Caddo, Homer, Haynesville, El Dorado, Bull Bayou, De Soto and Crichton crudes 15 cents. The Indian Refining Co. advanced western Kentucky light and heavy crudes 15 cents.

March 20—Humble Oil & Refining Co. advanced Grade A Gulf Coast crude 15 cents and Grade B Gulf Coast crude 10 cents.

April 1—Humble Oil & Refming Co. advanced both grades of Gulf Coast crude 20 cents.

April 3—Standard Oil Co. of Louisiana advanced Bellevue crude 20 cents.

April 18—The Texas Co. advanced Smackover crude 10 cents on all grades except that below 24 gravity, thus meeting the Standard Oil Co. (Louisiana) prices in all except the lowest grades, which remains at 85 cents, while the Standard's price is $1.

May 1.—Paragon Development Co advanced crudes in Warren and Simpson Counties, Kentucky, 6 cents.

May 10—Magnolia Petroleum Co. reduced prices for crudes purchased on gravity scale in Oklahoma, Kansas, and Texas, from 5 to 25 cents, except crude below 28 degrees gravity which was unchanged. Magnolia reduced price for Mexia crude 25 cents and also reduced price for Corsicana light crude 25 cents. Reductions were met by Humble Oil & Refining Co. same date. Indian Refining Co. reduced west Kentucky light and heavy crudes 31 cents each. Paragon Refining Co. reduced crude in Warren and Simpson Counties, Kentucky, 31 cents. Paragon Refining Co. reduced crude in Cumberland and Monroe Counties 25 cents. All grades Pennsylvania oil, Cabell, Somerset medium and Somerset light crudes were reduced 25 cents.

May 19—Humble Oil & Refining Co. posted prices effective before reduction of May 10, when it announced it would follow Magnolia Petroleum Co.'s reductions. Humble prices are retroactive as of May 10. Atlantic Oil Producing Co. reduced price of Smackover crude below 24 degrees gravity 15 cents.

May 27—New classification posted by Indian Refining Co. for Warren, Allen, Hancock and Ohio Counties, in Kentucky follows: Crude, 32.9 gravity and below, $1.85; 33 to 35.9 gravity, $1.95; 36 gravity and above, $2.05. Paragon Development Co. followed Indian classification and prices on crude in Warren and Simpson Counties, Kentucky. It did not change prices on crudes in Cumberland and Monroe Counties.

June 6—Magnolia Petroleum Co. reduced prices for crudes in Oklahoma, Kansas and Texas where purchased on a gravity basis from 10 to 50 cents. Magnolia Petroleum Co. reduced prices for Mexia crude 25 cents. Magnolia Petroleum Co. reduced price for Corsicana light crude 25 cents and Corsicana heavy crude 10 cents.

June 10—Standard Oil Co. (Louisiana) reduced prices on Smackover crude 15 cents.

June 14—Standard Oil Co. (Louisiana) posted price of $1 per bbl. on Cotton Valley crude. Joseph Seep Purchasing Agency reduced all grades Pennsylvania oil 50 cents; Cabell, Somerset medium and Somerset light were reduced 25 cents; Ragland crude was reduced 10 cents. Paragon Development Co. reduced Cumberland and Monroe County (Kentucky) crude 25 cents.

June 16—Joseph Seep Purchasing Agency reduced Corning crude 25 cents. Indian Refining Co. reduced three grades of western Kentucky crude 30 cents. Ohio Oil Co. reduced Wooster crude 15 cents.

BIG OIL COMPANIES UNITE AGAINST SOVIET

According to a report from London the Standard and Royal Dutch-Shell, with their subsidiaries, have agreed not to negotiate independently with the Soviet Government. After agreeing on a common policy in the Russian Field it is possible that the Standard and Royal Dutch-Shell may agree on a common sales policy in the Far East. These two groups are hereafter to make their proposals to the Soviet Government after joint deliberation and will not attempt separately to secure any advantage without previous consultation.

Shell and Royal Dutch met and discussed oil concessions with Soviet officials late this spring in Paris. Standard was a participant and close observer. Conversations dragged over a month. No settlement could be reached because the Soviet Government avoided coming to terms with the two big groups together. Soviet agents made renewed and desperate efforts to get contracts with outside smaller oil companies. The one positive outcome of the Paris conference was that Standard and Royal Dutch-Shell were brought closer together.

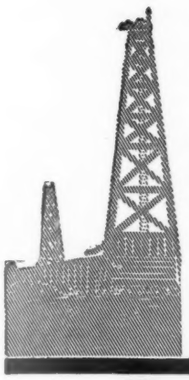
Walter H. Samuel, chairman of Shell Transport & Trading Co., denies that the understanding goes further than agreement on a common line of policy toward Russia.

Another leading Shell official said: "No other agreements relative to other markets have been made with the Standard yet." A Standard official intimated that while this is true it is possible that the two groups may reach an understanding in some markets.

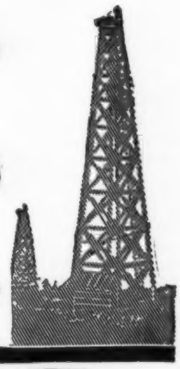
UNUSUAL FEATURES FOR ELECTRIC HOIST

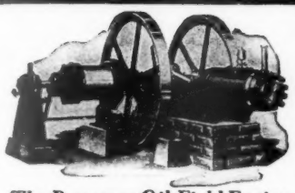
The Chisholm-Moore Manufacturing Co., of Cleveland, Ohio, has recently placed a new electric hoist on the market for the approval of all lines of industry. It has many unusual features which have aroused comment. The hoist is described in a 12-page booklet, just off the press.

The hoist was designed on the principle of filling the need for such an article having a minimum number of parts to get out of order. These parts are described as easily fixed if they give trouble. By the removal of six bolts conveniently placed, the entire hoisting mechanism can be pulled out, including drum, gears and all working parts. The booklet contains other interesting information concerning this hoist, including the dimensions and specifications on the varous types made by this concern.

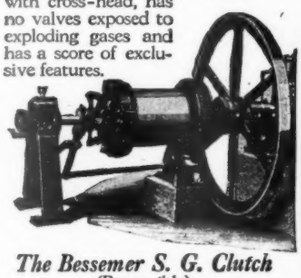


High Repeat Orders *mean* Lower Sales Expense *and that means* More Value Per Dollar

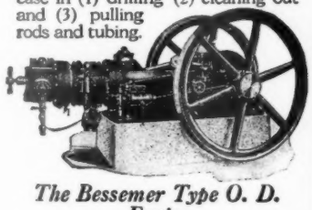




The Bessemer Oil Field Engine
Famous in deep oil territory the world over. Deep territory proves the worth of an engine and clutch. The original two-cycle engine, built with cross-head, has no valves exposed to exploding gases and has a score of exclusive features.



The Bessemer S. G. Clutch
(Reversible)
The latest big-scale improvement in Bessemer equipment. It will show you new standards in speed and ease in (1) drilling (2) cleaning out and (3) pulling rods and tubing.



The Bessemer Type O. D. Engine
Operates on either oil or gas with only a slight change in equipment. A proper engine for any oil field need—especially where a failure of natural gas threatens.

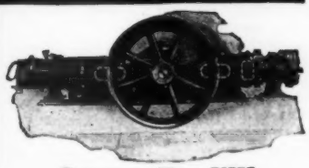
If Bessemer users didn't continue to order Bessemers almost automatically after their first trial, Bessemer sales-expense would climb rapidly.

When, virtually, every first sale means steady additional business year after year, it means that Bessemer can put into its products the money saved in selling.

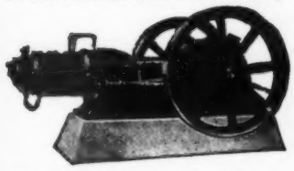
Buy Bessemers and you pay for solid value in material and painstaking workmanship. Buy Bessemers and you pay the least for sales-expense. Buy Bessemers once and you will continue to buy Bessemers indefinitely.

The Bessemer Gas Engine Co.
52 York Street Grove City, Pa.

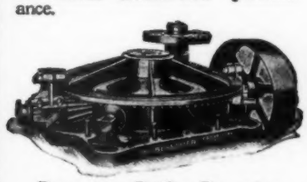
Service Branches in the Principal Production Centers



Bessemer Type VIII
(With Bessemer Compressor Cylinder)
Combining engine and compressor in one unit saves floor space, belting expense, foundation and installation costs, and insures reliable and efficient service. Standard equipment in the Gasoline-from-Gas Industry.



Bessemer Type IV Oil Engine
(15 to 180 H. P.)
Firmly established in its popularity, this engine with enclosed crank case, cross-head construction, patented combustion chamber and other features is without an equal for economical trouble-free performance.



Bessemer Roller Pumping Powers
—will give you better service, will wear longer, will require less attention, and are less liable to break because of nine important features.

BESSEMER

BESSEMER OIL FIELD ENGINES—COMPRESSORS VACUUM PUMPS—ROLLER PUMPING POWERS

Tank Wagon Prices Generally Higher

Gasoline Quotations in Each of 50 Representative Cities More on June 30 Than January 1. Price Wars a Factor

By C. O. Willson.

Gasoline tank wagon prices throughout the United States were higher at the end of the first six months of 1924 than they were at the beginning of the year. According to comparative data covering fifty representative cities scattered throughout the United States the average gasoline tank wagon price on January 1, 1924 was 14.32 cents per gallon not including gasoline road taxes. On June 30th the average tank wagon price was 17.64 cents or an increase of 3.32 cents for the six months.

The tank wagon price in every one of the fifty cities was higher on June 30 than on January 1. However, several cities experienced both an advance and a decline during the six months period. This situation for the entire fifty cities is indicated from the fact that the average price was higher on April 1 than it was on June 30. The average price on April 1, was 18.91 cents, the peak price of the six months.

Reduction in Latter Half

During the latter half of the six months a general reduction in the Rocky Mountain (Continental Oil Co.) territory developed and in addition prices were reduced in several more of the fifty cities due largely to "price wars." The half year closed with other general reductions probable.

As previously stated these comparative prices do not include road taxes. These taxes for the fifty cities are given in the accompanying table. It is interesting to note that these road taxes continue to add to the total tank wagon price and ultimately to the price paid by the consumer. On January 1, 1924 the average road tax in the fifty cities was 1.31 cents. By June 30, due to new road taxes and increases in the rates where they were effective previous to January 1, this average tax had increased to 1.48 cents an increase of 17 cents. Taking into consideration these taxes the average price on January 1, 1924 was 15.63 cents and on June 30, 19.12 cents.

Increased Taxes.

Following are the changes in road taxes which became effective during the period from January 1 to June 30, 1924:

Maryland increased from 1 to 2 cents on January 1; Oklahoma increased from 1 to 2½ cents on March 10; Mississippi increased from 1 to 3 cents on May 9; District of Columbia tax of 2 cents became effective May 23; Delaware tax of 1 cent increased to 2 cents on January 19; Kentucky tax of 1 cent increased to 3 cents on June 11.

Despite the increase in gasoline prices since the first of the year the average for the fifty cities on June 30 not including the road taxes was 2.25 cents less than it was on the same date of 1923. Including the road taxes the difference between the two years is not quite so great. The average tax on June 30 of last last year was .87 cents and on June 30 of this year this average had increased to 1.48 cents per gallon. In brief, .61 cents of the average total tank wagon price in United States on June 30 of this year was due to increases in the gasoline taxes brought about through the action of state and city governments during the past year.

Fundamentally the higher tank wagon prices are a development of the advances in crude advances early in the year and which were still effective in most of the fields on June 30. During the last nine months of 1923 there were constant slumps in the tank wagon prices throughout the United States so that by January 1, 1924 the average price of 14.32 cents was the lowest in the recent history of the industry.

When the crude advances began to materialize after the first of the year major marketing interests raised their tank wagon and service station prices in line with the increased costs and for the entire United States generally these higher prices continued up to June 30. The exceptions are due to a development which is explained in detail elsewhere in this issue. This development has to do with the fact that the spot refinery market on gasoline did not maintain the advances which materialized early in the year and beginning in February began to slump again.

This resulted in gasoline being available to independent jobbing interests at constantly lower prices so that based on prices to them there was an abnormal spread between the refinery price and the tank wagon or wholesale prices. This applied to practically all sections of the United States. For that reason price wars developed in several important gasoline consuming centers and as shown in the accompanying table several cities experienced reductions during the latter half of the first six months. These lower prices developed at such scattered points as Atlanta, Ga., Des Moines, Ia., Kansas City, Mo., Albuquerque, N. M., Tulsa, Okla., Dallas, Tex., and Minneapolis, Minn.

As to the future trend over the last of the year, it will undoubtedly be downward over the first half of the last six months at least. Important reductions have in fact been made since July 1. They are not given in the accompanying table which is confined to the first six

(Continued on Page 106)

TANK WAGON TABLE

Showing prices effective January 1, 1924 and all changes up to July 1, 1924; also prices effective January 1 and June 30, 1923 with road taxes in 1923 and 1924:

	1924 Jan. 1						June	1923 Jan.	1923 June	Road taxes In cents per gallon 1923 Jan.	1923 June	1924 Jan.	1924 June
	1/1	1/17	1/22	2/2	6/21		30	1	30				
Birmingham, Ala	14.0	16.0	18.0	20.0	18.0		18.0	16.0	18.0	1	2	2	2
Phoenix, Ariz.	1/1	1/22	2/5										
	16.0	18.0	20.0				20.0	21.5	19.5	1	1	3	3
Little Rock, Ark.	1/1	1/19	1/30										
	12.0	16.0	18.0				18.0	16.0	17.5	1	3	4	4
San Francisco, Cal.	1/1	1/22	2/5										
	11.0	13.0	15.0				15.0	19.0	16.0	–	–	2	2
Denver, Colo.	1/1	1/14	1/24	2/7	6/11								
	14.0	16.0	17.0	19.0	17.0		17.0	17.0	18.0	1	1	2	2
Hartford, Conn.	1/1	1/19	1/29										
	15.5	17.5	20.0				20.0	22.0	21.5	*1	1	1	1
Dover, Del.	1/1	1/15	1/19	1/28	2/9								
	14.0	16.0	17.0	19.0	20.0		20.0	21.0	20.0	–	1	1	2
Jacksonville, Fla.	1/1	1/17	1/22	2/2	6/21								
	13.0	15.0	17.0	19.0	17.0		17.0	16.0	18.0	1	1	3	3
Atlanta, Ga.	1/1	1/17	1/23	2/2	2/13	6/21							
	11.0	13.0	15.0	17.0	19.0	17.0	17.0	18.0	20.0	1	1	3	3
Boise, Idaho	1/1	1/26	2/8										
	18.0	20.5	22.5				22.5	22.0	22.5	–	2	2	2
Peoria, Ill.	1/1	1/12	2/5										
	14.2	16.2	18.2				18.2	18.8	20.8	–	–	–	–
Chicago, Ill.	*1/1	1/12	2/5	3/6									
	14.0	16.0	18.0	15.25			15.25	18.0	20.0	–	–	–	–
Indianapolis, Ind.	1/1	1/12	2/5										
	14.2	16.2	18.2				18.2	18.8	19.8	–	2	2	2
Des Moines, Iowa	1/1	1/12	2/5	5/31	6/10								
	14.5	16.5	18.5	17.5	16.0		16.0	19.1	21.1	–	–	–	–
Wichita, Kans.	1/1	1/12	2/5										
	13.8	15.8	17.8				17.8	18.4	20.4	–	–	–	–
Louisville, Ky.	1/1	1/17	1/22	2/2									
	13.0	15.0	17.0	19.0			19.0	18.0	21.0	1	1	1	1
New Orleans, La.	1/1	1/14	1/18	1/28									
	11.5	12.5	14.5	16.5			16.5	16.0	15.5	*1	1	1	1
Augusta, Maine	1/1	1/15	1/29										
	14.5	16.5	19.0				19.0	22.0	21.5	–	–	1	1
Baltimore, Md.	1/1	1/14	1/28										
	15.0	17.0	19.0				19.0	20.5	20.5	1	1	2	2
Springfield, Mass.	1/1	1/19	1/21	1/29									
	14.5	16.5	17.5	20.0			20.0	22.2	21.5	–	–	–	–
Detroit, Mich.	1/1	1/12	2/5										
	14.8	16.8	18.8				18.8	19.4	21.4	–	–	–	–
*Duluth, Minn	1/1	1/12	2/5										
	16.2	17.2	19.2				19.2	19.8	21.8	–	–	–	–
Natchez, Miss.	1/1	1/17	1/22	2/2	6/21								
	12.5	15.5	17.5	18.5	16.5		16.5	16.0	18.0	1	1	1	2
Kansas City, Mo.	1/1	1/12	2/5	5/31	6/10	6/28							
	13.9	15.9	17.9	15.9	14.9	11.9	11.9	17.5	19.5	–	1	1	1
Great Falls, Mont.	1/1	1/14	2/8	6/3									
	19.0	21.0	23.0	21.0			21.0	20.5	22.0	1	2	2	2
Omaha, Neb.	1/1	1/12	2/6	5/20									
	14.25	16.25	18.25	15.0			15.0	18.25	20.5	–	–	–	–
Reno, Nev.	1/1	1/22	2/5										
	14.5	16.5	18.5				18.5	22.5	19.5	–	2	2	3
Newark, N. J.	1/1	1/14	1/28										
	15.5	17.5	19.5				19.5	21.5	21.5	–	–	–	–
Albuquerque, N. M.	1/1	1/9	1/14	1/25	2/8	6/9							
	18.0	19.0	20.0	21.0	23.0	21.0	21.0	22.0	22.5	01	1	1	1
New York, N. Y.	1/1	1/15	1/29										
	16.5	17.5	20.0				20.0	22.0	21.5	–	–	–	–
Charlotte, N. C.	1/1	1/14	1/23										
	15.0	17.0	19.0				19.0	18.0	21.0	1	3	3	3
Fargo, N. D.	1/1	1/12	1/14	2/5	6/12								
	16.6	18.9	17.6	19.6	17.8		17.8	22.8	24.3	–	–	1	1
Cleveland, Ohio	1/1	1/12	1/21	2/4	6/23								
	16.0	17.0	18.5	20.0	19.0		19.0	19.0	21.0	–	–	–	–
Tulsa, Okla.	1/1	1/9	1/15	1/17	2/8	6/19							
	12.0	14.0	15.0	16.0	18.0	13.5	13.5	16.0	15.0	–	–	1	1.5
Portland, Ore.	1/1	1/22	2/5										
	12.0	14.0	16.0				16.0	20.0	17.0	2	3	03	3
Philadelphia, Pa.	1/1	1/15	1/19	1/28	2/9								
	14.0	16.0	17.0	19.0	20.0		20.0	21.0	21.0	*1	–	*2	*2
Providence, R. I.	1/1	1/19	1/29										
	15.5	17.5	20.0				20.0	22.0	21.5	–	–	–	–
Charleston, S. C.	1/1	1/14	1/23										
	15.0	17.0	19.0				19.0	16.0	19.0	2	3	3	3
Huron, S. D.	1/1	1/9	2/5										
	16.0	18.0	20.0				20.0	20.6	22.6	1	1	2	2
Memphis, Tenn.	1/1	1/14	1/18	1/28	2/14	2/18	2/23	3/7					
	12.0	14.0	16.0	18.0	16.0	14.0	16.0	14.0	14.0	15.6	17.0	1	–	2	3
Dallas, Texas	1/1	1/4	1/15	1/29	2/5	3/6	5/17	6/28							
	11.0	13.0	14.0	16.0	13.0	17.0	15.0	13.0	13.0	16.0	14.0	1	–	1	1
Salt Lake City, Utah	1/1	1/14	1/26	2/8											
	16.5	18.5	19.5	21.5			21.5	20.5	21.5	–	2.5	2.5	2.5
Burlington, Vt.	1/1	1/15	1/23										
	14.5	16.5	19.0				19.0	22.0	21.5	–	1	1	1
Norfolk, Va.	1/1	1/15	1/23	1/28									
	16.0	17.0	18.0	19.0			19.0	19.5	20.0	–	2	3	3
Washington, D. C.	1/1	1/14	1/28										
	15.0	17.0	19.0				19.0	....	....	–	–	–	3
Charleston, W. Va.	1/1	1/14	1/23	1/28									
	16.0	17.0	18.0	19.0			19.0	20.5	21.0	–	–	2	2
Milwaukee, Wis.	1/1	1/12	2/5	6/2									
	14.0	16.1	18.1	16.1			16.1	18.6	20.6	–	–	–	–
Casper, Wyo.	1/1	1/14	1/24	2/7	6/11								
	14.0	16.0	17.0	19.0	17.0		17.0	14.5	17.0	–	1	1	1
Seattle, Wash.	1/1	1/22	2/5										
	12.0	14.0	16.0				16.0	20.0	17.0	1	1	2	1
*Minneapolis, Minn.	1/1	1/12	2/5	5/30	6/7	6/15	6/28						
	14.9	16.9	18.9	15.0	14.0	13.0	12.0	12.0	19.5	21.5	–	–	–	–
Average price	14.32							17.64	19.21	19.89	0.49	0.87	1.31	1.48

Note—Above tank wagon prices do not include road taxes.
*Paid by the retailer.

Refinery Prices Slump First Half 1924

Average Fuel Oil and Gasoline Quotations Lower Than First Half of Last Year With Kerosenes and Lubricating Oils Higher. Wax Strongest Product

By C. O. Willson

The greater part of the first six months of 1924 was a period of slumping prices in a majority of refined products in all sections of the United States. Compared to the first six months of last year prices were generally lower. Taking into consideration the crude prices for the same period of the two years, the comparative data show that from the standpoint of profitable operation the first half year of 1924 was less favorable than the first six months of last year generally conceded to have been one of the worst periods that the refining industry had experienced up to that time.

Compared to the last six months of last year the first six months of this year was one of higher prices. Considering the increased crude costs it is doubtful, however, if operations to date considered from the standpoint of the refineries, were as generally profitable as they were the latter half of last year. In brief, a study of the accompanying week to week quotations as carried in The Oil and Gas Journal, together with the average prices for the six months period leaves little doubt that refiners lost more than they have in a similar period in recent times. There are, of course, exceptions to this condition as there are always a few plants which, due to their crude supply or advantageous market situation, are able to avoid an unfavorable condition affecting the refining industry generally.

Compared to 1923

In regard to price trend there was a remarkable similarity between conditions the first half of this year and the same period last year. Both years opened with a favorable outlook. Crude prices advanced in practically all fields in January, the advances in some cases extending over February. It was believed that conditions augured well for higher prices in refined products and logically there were week to week advances in a majority of the refined products, notably gasolines and fuel oils.

At approximately the same time in both years—February and March—it became apparent that refiners were unable to maintain the higher prices, especially in gasolines, and price slumps got under way in several products which were not halted except for short periods when the half year periods ended. This again describes a general situation for, as will be pointed out later, there were exceptions both in products and refining areas.

The main difference between half year periods of last year and this lies in the fact that the average prices for the six months are lower this year. A study of the accompanying tables will show that prices at the refineries at the beginning of the year, especially gasolines and fuel oils, were not as high this year as last and they slumped during the six months to lower levels. It is this condition with approximately the same crude prices prevailing that leads to the conclusion that refinery operations generally were less profitable this year than last.

Gasolines

All grades of gasoline were advancing rapidly the first of the year after having slumped during 1923 so that by late November and early December, the general level was the lowest in several years. Prices reached their peak early in February in some refining areas and in others continued to advance until March.

TABLE NO. 1

Giving Average Refined Market Prices for the First Six Months of 1924 and the Two Half-Year Periods of 1923. Prices Based on the Low Quotations Given in the Weekly Market Pages of The Oil and Gas Journal

	1924			1923							
	Av. Price 1st 6 mos.	High	Low	Av. Price 1st 6 mos.	High	Low	Av. Price 2d 6 mos.	High	Low	Av. Price for year	High	Low
Gasoline and Naphtha, Oklahoma (Group 3)—												
50-52, 450 end point	$ .09.8	.11½	.08	$.11.64	.13½	.09½	$.06.82	.09½	.05¼	$.09.23	.13½	.05¼
56-58, 450 end point	.09.9	.11¾	.08	.11.78	.13½	.09¾	.06.99	.09¼	.06	.09.39	.13½	.06
58-60, 437 (New Navy)	.10.3	.12¼	.08½	.12.32	.14½	.10	.07.26	.09½	.06¼	.09.78	.14¼	.06¼
60-62, 400	.11.2	.13¼	.09½	.13.85	.15½	.11¾	.08.80	.11½	.07¼	.11.34	.15½	.07¼
64-66, 375	.12.2	.14¼	.09¾	.14.93	.16½	.13	.09.84	.12½	.08¼	.12.38	.16½	.08¼
68-70, 350-365	.12.9	.15¼	.11	.16.03	.17½	.15	.11.17	.14	.09½	.17.60	.17½	.09½
Kansas—												
58-60, 437 (New Navy)	.10.5	.12½	.08½	.12.59	.15	.10¼	.07.51	.10	.06¼	.10.00	.15	.06¼
North Texas—												
50-52, 456	.09.8	.11¼	.08	.11.59	.13½	.10	.06.85	.09½	.05¼	.09.22	.13½	.05¼
58-60, 427	.10.2	.12	.09¼	.12.28	.14½	.10¼	.07.16	.09¾	.06	.09.65	.14½	.06
64-66, 390	.12.0	.14½	.10	.14.61	.16	.12½	.09.47	.13	.08	.12.04	.16	.08
Pennsylvania—												
52 Naphtha	.12.1	.11¾	.11½	.14.61	.16	.13¼	.10.58	.12¾	.08¾	.12.57	.16	.08¾
58 Gasoline	.13.2	.15	.12	.15.53	.17¼	.14	.11.51	.13¾	.09½	.13.52	.17¼	.09½
60 Gasoline	.14.0	.15¾	.12¾	.16.43	.18¼	.15	.12.81	.14¾	.10	.14.30	.18¼	.10
64 Gasoline	.15.6	.17½	.14¼	.18.83	.20½	.17¼	.14.81	.17¼	.13	.16.83	.20½	.13
68-70 Gasoline	.17.8	.19½	.16¼	.22.54	.23½	.21¼	.14.28	.20½	.16	.20.41	.23½	.16
Natural Gasoline—												
Grade A, 72-78 under 375 e. p., rec. 90%	.09.1	.11	.06	.11.44	.14¾	.07¾	.06.82	.08¼	.05½	.09.13	.14¾	.05½
Grade B, 76-82, 375 e. p., rec. 85%	.08.4	.10¾	.06	.11.01	.13¾	.07¼	.06.48	.07¼	.05¼	.08.75	.13¾	.05¼
Grade C, 80-88, 350 e. p., rec. 78%	.07.7	.09¾	.05¾	.10.32	.13¾	.06¼	.06.15	.06¾	.04½	.08.23	.13¾	.04½
North Texas—												
Grade A, 72-78 under 375 e. p., rec. 90%	.08.9	.11	.06	.11.00	.14	.07½	.06.71	.08½	.04¾	.08.85	.14	.04¾
Grade C, 80-88, 350 e. p., rec. 78%	.07.6	.09½	.05¾	.10.38	.13½	.06½	.06.20	.08	.04¾	.08.29	.13½	.04¾
Motor Natural Gasoline (Blend), Oklahoma—												
60-62, 450 end point	.09.5	.11½	.08	.11.34	.13½	.09¾	.06.69	.08½	.05¾	.09.01	.13½	.05¾
68-70, 430-435 end point	.09.4	.11¼	.07¾	.11.42	.14	.09½	.06.86	.08½	.05¾	.09.16	.14	.05¾
Burning Oil, Oklahoma—												
41-43 water white Kerosene	.04.6	.06	.04	.04.12	.05	.03¾	.03.93	.04¾	.03¾	.04.00	.05	.03¾
42-43 water white Kerosene	.04.9	.06¼	.04¼	.04.33	.05¼	.04	.04.15	.04¼	.04	.04.24	.05¼	.04
Kansas—												
41-43 water white Kerosene	.05.1	.06½	.04¼	.04.40	.04¾	.04	.04.32	.04¾	.04	.04.36	.04¾	.04
North Texas—												
41-42 water white Kerosene	.04.6	.06¼	.03¾	.03.92	.04½	.03½	.03.81	.04½	.03½	.03.86	.04½	.03½
Pennsylvania—												
43 Kerosene prime white	.06.7	.07½	.05¾	.06.80	.07¼	.06	.06.24	.07	.05¾	.06.52	.07¼	.05¾
45 Kerosene water white	.07.1	.08	.06	.07.17	.07¾	.06¼	.06.61	.07¼	.05¾	.06.84	.07¾	.05¾
Fuels Oils—												
28-32 (El Dorado)	.90.3	1.05	.72½	.84.80	1.00	.80	.74.30	.90	.60	.79.55	1.00	.60
Kansas—												
24-26 Fuel Oil	1.08	1.30	.90	1.09.20	1.15	1.05	1.00.00	1.15	.85	1.04.06	1.15	.85
38-40 Distillate	.03.7	.04¼	.03¼	.03.38	.03¾	.03	.03.10	.03½	.02½	.03.24	.03¾	.03¼
Oklahoma—												
24-26 Fuel Oil	.97.3	1.25	.72½	1.03.68	1.15	.90	.86.54	.95	.70	.95.11	1.15	.70
32-36 Gas Oil	.02.9	.03?	.02½	.02.98	.03¼	.02¾	.02.35	.02¾	.02¼	.02.66	.03¼	.02¼
38-40 Straw Distillate	.03.5	.04¼	.03¼	.03.32	.03¾	.03¼	.02.78	.03¼	.02¾	.03.05	.03¾	.02¾
North Texas—												
24-26 Fuel Oil	.88	1.25	.80	1.00.60	1.15	.85	.77.30	.90	.60	.87.95	1.15	.60
32-36 Gas Oil	.03	.03½	.02½	.02.74	.03	.02¼	.02.36	.02½	.02¼	.02.55	.03	.02¼
38-40 Straw Distillate	.03.5	.04¼	.03⅜	.03.03	.03¼	.02¾	.02.82	.03¼	.02½	.02.96	.03¼	.02½
North Louisiana—												
Fuel Oil	.94.6	1.10	.85	1.06.00	1.20	.85	.77.11	.95	.65	.92.10	1.20	.65
Gulf Coast—												
Gas Oil	.04	.04.65	.03¼	.04.67	.05	.04	.03.33	.04¾	.02¾	.04.00	.05	.02¾
Fuel Oil	1.70	1.75	1.15	1.54.93	1.60	1.25	1.23.00	1.40	1.10	1.36.96	1.60	1.10
Pennsylvania—												
30°-34° Fuel Oil, gal.	.05.3	.05½	.05	.05.70	.06½	.04¾	.04.98	.05½	.04¾	.05.40	.06½	.04¾
36°-40° Fuel Oil, gal.	.05.7	.06	.05¼	.05.94	.06¾	.05¾	.05.25	.05¾	.05	.05.60	.06¾	.05
Neutral Oils, Oklahoma—												
100 vis., 3 color, 20-25 cold test	.05.4	.05½	.04¾	.06.67	.07¼	.05¾	.05.26	.05¾	.04¾	.06.06	.07¼	.04¾
180 vis., 3 color, 23-28 cold test	.14.1	.15	.12	.12.21	.12½	.10¾	.12.77	.14	.13	.12.49	.14	.10¾
200 vis., 3 color, 23-28 cold test	.15.3	.16	.13	.12.80	.13	.12	.13.55	.15	.13	.13.17	.16	.12
180 vis., 5 color, 23-28 cold test	.12.5	.13½	.10½	.10.80	.11	.10	.11.27	.12½	.10½	.11.03	.12½	.10
200 vis., 5 color, 23-28 cold test	.13.8	.14½	.11½	.11.54	.12¼	.10½	.12.05	.13½	.11½	.11.75	.12¼	.10½
240 vis., 5 color, 25-30 cold test	.15.4	.16	.12¾	.13.30	.13½	.12½	.14.05	.15½	.13¼	.13.67	.13½	.12½
500-600 Bright Stock	.27.4	.28	.23	.26.80	.27	.26	.24.04	.28	.23	.26.42	.28	.23
124-126 White Crude Scale Wax	.04.2	.05¼	.03	.02.42	.02¾	.02¼	.02.65	.03	.02¾	.02.54	.03	.02¼
Pennsylvania—												
600 Pennsylvania Flash	.27.0	.30½	.20½	.19.22	.22	.17	.16.34	.18½	.13	.17.80	.22	.13
Pennsylvania Bright Stock	.37.2	.40	.33	.36.06	.40	.33	.31.75	.33½	.31½	.33.37	.40	.31½
Gulf Coast—												
No. 3 color, 200 vis., pale oil	.14.2	.15½	.12½	.12.25	.12¾	.11⅛	.10.70	.11½	.10	.11.47	.12¾	.10
No. 5 color, 200 vis., red	.12.5	.13½	.11	.10.18	.10½	.09	.09.40	.10	.09	.09.79	.10½	.09
New York Domestic Market—												
Gasoline, bulk delivered at New York	.14.6	.16½	.10	.17.26	.20	.13½	.10.51	.12	.09½	.13.88	.20	.09½
Cylinder, extra light filtered	.41.3	.45½	.37½	.39.21	.40½	.37	.37.34	.40½	.36½	.38.23	.40½	.36½
Cylinder, bright stock	.47.9	.19½	.44	.46.56	.47½	.45	.44.52	.47½	.44	.45.52	.47½	.44
Paraffin, 903 specific gravity	.26.0	.31	.22½	.24.16	.24½	.24	.23.62	.24½	.22½	.23.89	.24½	.22
Bunker Oil, 14 plus delivered in barges, bbl.	1.62	1.75	1.35	1.62.20	1.70	1.45	1.61.60	1.70	1.35	1.56.90	1.70	1.35
Diesel Oil at refinery, gal.	.04.7	.05½	.03½	.04.46	.04¾	.04¼	.04.10	.04½	.03½	.04.28	.04¾	.03¾
120-122 a.m.p. wax	.04.9	.06¼	.04	.03.17	.03¼	.03	.03.34	.04	.03¼	.03.25	.04	.03
New York Export Market—												
Motor Gasoline in cases, gal.	.27.5	.28.15	.24.04	.28.90	.29¾	.28¼	.25.82	.28.65	.24.15	.27.41	.29¾	.25.15
Motor Gasoline, U. S. Navy	.13.5	.14.25	.10.05	.15.68	.16½	.15	.12.06	.15	.10.05	.13.87	.16½	.10.05
Naphtha, 60° F. 59-61 spec. grav.	.15.0	.16.0	.12	.18.18	.19	.17½	.13.30	.17½	.12	.15.74	.19	.12
Standard white Kerosene in bulk, gal.	.06.8	.07	.06½	.06.66	.07	.06	.06.08	.07	.05¼	.06.36	.07	.05¼
Standard white in barrels, gal.	.13.8	.14	.13½	.13.14	.13½	.13	.13.08	.14	.12½	.13.12	.14	.12½
Standard white in cases	.17.0	.17.15	.16.09	.16.14	.16½	.15½	.15.19	.17.15	.16.04	.16.06	.17.15	.16.04
Water white in bulk	.07.8	.08	.07½	.07.54	.08	.06	.07.00	.08	.06½	.07.27	.08	.06¼
Water white in barrels	.14.8	.15	.14½	.14.22	.14½	.13	.14.08	.15	.13½	.14.15	.15	.13
Water white in cases	.18.3	.18.05	.17.09	.17.22	.17½	.16½	.17.06	.18.05	.16.04	.17.14	.18.05	.16.04

CLIFF SMITH is the Chief Engineer of the Kay County Gas Company Compressing Plant in the Tonkawa Field, Oklahoma.

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In the Mid-Continent area the highest prices of the six months prevailed during the first two weeks of February. In the case of New Navy gasoline the principal gasoline product, the peak price based on the low weekly quotation in The Oil and Gas Journal was 12¼ cents in Oklahoma (Group 3.) The peak price for the same grade of gasoline the first six months of 1923 was 14½ cents.

After reaching the 12¼-cent level, New Navy began slowly to decline. Several times, for a period of a few days to two weeks, prices would advance but they never again reached the 12¼-cent level and in the general downward trend reached a low of 8¼ cents about the middle of June. During the latter part of June the gasoline market in the Mid-Continent was again advancing and the six months period closed with prices slightly higher than the low point.

The price movement of the New Navy is described because, as shown in Table 2, its week to week trend is practically the same as all other grades of straight run gasolines in the Mid-Continent area. The average weekly price for New Navy of 10.3 cents per gallon in Oklahoma (Group 3) is the lowest since before the war. The same situation applies to all other straight run gasolines in the Mid-Continent area.

As shown in Table 2 the price trend of straight run gasolines in refining areas outside of the Mid-Continent area for the first six months also advanced the first part of the year and then slumped. The 58 gravity gasoline in Pennsylvania reached a high of 15 cents in February and declined to a low of 12 cents in June with an average weekly price of 13.2 cents for the six months period. This compares with the first six months of last year when the same grade of gasoline reached a high of 17¼ cents and a low of 14 cents with an average price of 15.53 cents.

Spot gasoline delivered at New York opened the year at 10 cents. This market always follows the spot price at interior points either in an advance or reduction. Due to that fact it had only advanced ½ cent from the low price in effect the latter part of last year at the beginning of 1924. It advanced to a high of 16½ cents and has since receded so that on July 1 the price was 14½ cents.

Natural Gasolines

Average natural gasoline prices for the first six months are lower this year than last although higher than the last six months of 1923 as shown in Table 1. Natural gasolines in the Mid-Continent area have followed very closely the price trend in straight run gasolines although the range between the high and low is slightly greater. The average price for Grade A on Oklahoma the first six months was 9.1 cents this year and 11.44 cents last year. Approximately the same difference in average prices is shown in other grades. Prices this year advanced until February and then declined until the last week in June when an improved demand caused prices to again advance.

Motor Natural Gasoline (Blends)

The changes in blend prices the first six months was practically the same as the straight run gasolines. The demand was not so strong as it has been in previous years due to the low prices of the straight run products. However the production is easily controlled and the blenders have been able to maintain the usual price relationship between their products and those of the refiners.

Kerosenes

In the Mid-Continent section, average kerosene prices were slightly higher than the first six months of last year and considerable higher than the last half of last year. In the North Texas the average price for 41-43, water white kerosene was 4.6 cents as against 3.92 cents the first half of last year and 3.81 cents the latter half. In Oklahoma the average price the first six months this year was 4.6 for the same grade and 4.12 and 3.93 cents the two half year periods of last year. Approximately the same relationship existed in other areas of the Mid-Continent area. The higher prices are due to an exceptionally heavy domestic and export movement early in the year. The 41-43, water white grade advanced to a high of 6 cents early in February. Prices slumped in March but a heavy domestic demand from the rural sections during the spring months brought another advance which continued firm until June.

In Pennsylvania average gasoline prices for the first six months were approximately the same as those covering the same period last year. Prices advanced to a higher figure than last year but also slumped to a lower level. Export prices were generally higher this year than last. In the New York export market water white in cases averaged 18.3 cents the first half of this year as against 17.22 cents the first half last year and 17.06 cents the latter half. Standard white in bulk brought an average of 6.8 cents this year and 6.66 cents last year.

Fuel and Gas Oils

Fuel and gas oils prices in most refining areas were generally higher than the latter half of last year and lower than the first half. The only important exception to this rule was in the Gulf Coast area where fuel oil the first six months of this year brought an average price of $1.70 as against $1.549 the first half of last year. Fuel oil advanced to $1.95 and was forced to a low of $1.10. Gas oil, however, even in that area was lower than last year. The average for the first six months was 4 cents as against 4.67 cents the first six months of 1923.

Fuel and gas oil prices advanced with the crude market early in the year but like gasoline was unable to maintain a spot market in line with the cost of crude and the slump in prices was consistent from March to July 1. A slowing up in the industries was held responsible for the price decline in the spot market for fuel oil. Contractual agreements based on the price of crude by railroads and many other large users probably exceeded in volume any previous year but the spot demand was never consistently strong. There was also more coal offered at lower prices and this also served to lessen the demand for fuel oils.

In Oklahoma the 24-26 grade brought an average price of 97,3 cents the first six months and this was approximately 6.5 cents under the price prevailing the same period of last year. In Pennsylvania the average price for 30-34 was 5.3 cents and 5.7 cents for the first six months of last year. Bunker fuel prices were approximately the same. The average for the first six months of this year was $1.62 and $1.622 the first half of last year.

The gas oil market was practically the same as fuel oil in most sections. In Oklahoma the average price for 32-36 gas oil was 2.9 cents and 2,98 cents the first half of last year. However, in North Texas gas oil brought approximately ¼ cent more this year than last.

Distillates

Distillate prices were slightly higher this year. The demand for distillates has increased and with the higher prices for kerosenes also aided the market. In Oklahoma the average price for 38.40 straw distillate was 3.5 cents as against 3.32 cent sfor the first half of last year and 2.82 cents for the last half.

Lubricating Oils

Most of the materials used in the compounding of lubricating oils were higher this year than last. It will be recalled that last year lubricating oils were the strongest of the refined products throughout the greater part of the year. There was a strong demand from the industries as well for automobile use and the manufacturers were generally able to maintain their prices regardless of lower crude prices.

Prices were raised the early part of this year when crude prices were again advanced and although prices have since been reduced, the general price level for the six months was higher than last year. There are a few exceptions to this rule, the lower viscosity neutrals being lower than they were last year in the Mid-Continent area.

Neutrals and cylinder stocks began to weaken in March but bright stocks prices have been generally firm backed with a strong demand. In Oklahoma, the average price for 590-600 bright stocks was 27.4 cents as against 26.8 cents the first half of last year. The average for Pennsylvania bright stock was 37.2 cents and 36.6 cents the first half of last year. In New York domestic market the average price for extra light filtered was 41.3 cents as against 39.21 cents for the first half of last year, 31.75 cents the latter half of the year and 33.37 cents for the year.

Diesel Oils

Diesel oil is higher so far this year than last. At New York the average price the first six months was 4.7 cents. The average price last year was 4.28 cents.

Wax is the one product to show a distinct price advantage over last year. The average price in Oklahoma the first six months was 4.2 cents with a high spot price of 5¼ cents. In the New York domestic market the 120-122 a. m. p. wax averaged 4.9 cents the first six months. This was an increase of approximately 1¾ cents over the average for the first six months of last year. The product reached its peak in April and May due to heavy export shipments and slumped slightly in price in June.

OIL FOR A CENTURY IN POLAND RESERVE

Whether there are still any substantial undiscovered reserves of crude onl in the Lower Carpathians or the crude oil which up to now has been obtained comprises the greater part of all the crude oil available, is becoming a question more and more important and requiring a quick solution, says London Petroleum Times. Polish oil territories, from the geological point of view, have been investigated to a very small extent. Only since he rebirth of Poland some important and systematic geological work has been initiated. But even those lean results do not allow pessimistic conclusions; on the contrary, they point, for instance, to the fact that hardly 7 per cent of known geological oil strata have been subject to exploitation.

The late geologist, Proffessor Grzybowski, basing his calculation on the existence of these oil strata, estimated the reserves of crude oil in Little Poland at 100,000,000 to 160,000,000 tons. This estimate is considered very pessimistic. Taking into account the total quantity of crude oil obtained in Poland for the 60 years of existence of the oil industry at about 26,000,000 tons, 15 per cent of presumed reserves, we come to the conclusion that the reserves of crude oil concealed in the Lower Carpathians would last for a period longer than a century.

Giving Prices on Representative Refined Products for Export and Domestic Shipment

	January					
	1	8	15	22	29	5
Gasoline and Naphtha, Oklahoma (Group 3)—						
50-52, 450 end point	.08¼	.08½	.10½	.10⅝	.10⅝	.11⅛
56-58, 450 end point	.08½	.09	.11¼	.11⅛	.11	.11⅝
58-60, 437 (New Navy)	.09	.09½	.11½	.11⅛	.11¼	.12¼
60-62, 400 end point	.09¾	.10½	.12½	.12½	.12¼	.13⅛
64-66, 375 end point	.10⅜	.11⅛	.13½	.13½	.13¼	.14⅛
68-70, 350-365 end point	.11¼	.12	.14	.14¼	.14	.16⅛
Kansas—						
58-60, 437 (New Navy)	.09¼	.09⅝	.11⅝	.11⅝	.11½	.12⅜
North Texas—						
50-52, 450 end point	.08¼	.08½	.10½	.11	.10⅝	.11⅝
58-60, 437 (New Navy)	.09	.09¼	.11½	.11⅝	.11¼	.12
64-66, 390 end point	.10¼	.11	.13¼	.13½	.13	.14
Pennsylvania—						
52 Naphtha	.09	.09	.11	.11	.12⅝	.13
58 Gasoline	.10¼	.11½	.12½	.13½	.14⅜	.15
60 Gasoline	.10⅜	.11½	.13	.14¼	.16	.16⅝
64 Gasoline	.13	.13	.14½	.16	.17	.17⅛
68-70 Gasoline	.16	.16¼	.16½	.17½	.18⅝	.19⅛
Natural Gasoline, Oklahoma (Group 3)—						
Grade A, 72-78 under 375 e.p., rec. 90%	.08	.08½	.11	.10½	.10½	.11
Grade B, 76-82, 375 end point, rec. 85%	.07¼	.08	.10	.09⅝	.09⅝	.10⅝
Grade C, 80-88, 350 end point, rec. 78%	.06	.07	.09	.08⅝	.09	.09⅝
North Texas—						
Grade A, 72-78 under 75 e.p., rec. 90%	.08	.08½	.10⅝	.10½	.10¼	.11¼
Grade C, 80-88, 350 end point, rec. 78%	.05⅝	.06⅝	.08⅝	.08⅝	.08⅛	.09⅛
Motor Natural Gaso. (Blend), Oklahoma (Group 3)—						
60-62, 450 end point	.08	.08⅝	.11	.11	.10½	.11⅝
68-70, 430-437 end point	.08	.08⅝	.11	.11	.10½	.11¼
Burning Oils, Oklahoma (Group 3)—						
41-43 water white Kerosene	.04½	.04⅝	.06½	.05½	.05⅝	.06
42-43 water white Kerosene	.04⅝	.05	.05⅝	.05⅝	.05⅝	.06⅛
Kansas—						
41-43 water white Kerosene	.05	.05¼	.05⅝	.05⅝	.05⅝	.06⅛
North Texas—						
41-43 water white Kerosene	.04½	.04⅝	.05½	.05⅝	.05⅝	.06⅛
Pennsylvania—						
43 Kerosene prime white	.07	.07	.07	.07	.07⅝	.07⅛
45 Kerosene water white	.07½	.07½	.07⅝	.07⅝	.07⅝	.08
Fuel Oils—						
20-24 (El Dorado, Ark.), bbl.	72½	.80	.90	.90	1.00	1.00
Kansas—						
24-26 Fuel Oil, bbl.	.95	1.05	1.15	1.25	1.20	1.30
38-40 Distillate	.03⅝	.03⅝	.04¼	.04	.04	.04⅛
Oklahoma (Group 3)—						
*24-26 Fuel Oil, bbl.	.90	.95	1.10	1.15	1.15	1.25
32-36 Gas Oil	.02½	.02⅝	.03½	.03½	.03⅝	.03⅝
38-40 Straw Distillate	.03¼	.03½	.04	.04	.04	.04⅛
North Texas—						
24-26 Fuel Oil	.80	.90	1.05	1.20	1.20	1.35
32-36 Gas Oil	.02½	.02⅝	.03	.03⅝	.03½	.03⅝
38-40 Straw Distillate	.03¼	.03½	.04	.04	.04	.04⅛
North Louisiana—						
20-22 Fuel Oil, bbl.	.75	.85	1.10	1.10	1.10	1.05
Gulf Coast—						
Gas Oil	.03½	.04	.04½	.04½	.04¾	.04¾
Fuel Oil, bbl.	1.15	1.15	1.40	1.60	1.60	1.60
Pennsylvania—						
30-34 Fuel Oil	.05	.05	.05¼	.05¼	.05¼	.05⅝
36-40 Fuel Oil	.05¼	.05¼	.05½	.05⅝	.06	.06
Neutral Oils and Wax, Oklahoma—						
100 vis., 3 color, 20-25 cold test	.05	.04⅜	.04⅜	.05½	.05⅝	.05⅝
180 vis., 3 color, 23-28 cold test	.12	.12	.12½	.13	.13	.13
200 vis., 3 color, 23-28 cold test	.13	.13	.13⅛	.15	.15	.15
180 vis., 5 color, 23-28 cold test	.10⅜	.11	.11½	.11½	.13½	.13⅝
200 vis., 5 color, 23-28 cold test	.11½	.12¼	.12½	.12½	.14⅜	.14⅜
240 vis., 5 color, 25-30 cold test	.13½	.13⅝	.14¼	.14⅜	.14⅜	.14⅜
590-600 Bright Stock	.23	.23	.26	.27	.27	.27
124-126 White Crude Scale Wax, lb.	.03	.03½	.03½	.03⅝	.03⅝	.04
190-200 dark green 40-50 cold test	.04	.04⅝	.05	.06	.06	.06
Pennsylvania—						
600 Pennsylvania Flash	.20½	.21½	.26	.26¼	.27	.27½
Pennsylvania Bright Stock	.33	.34	.34½	.34½	.38	.38
Gulf Coast—						
No 3 color, 200 vis., pale oil	.12½	.13½	.12½	.13	.13	.13⅝
No. 5, 200 vis., red	.11	.11	.11	.11	.11	.11⅝
New York Domestic Market—						
Gasoline bulk, delivered New York	.10	.10	.10	.12	.12	.16
Cylinder, extra light filtered	.37½	.37½	.37½	.37½	.37½	.40⅝
Cylinder bright stock	.44	.44	.44	.44	.44	.48
Paraffin 90.3 spec. gravity	.22½	.22⅝	.22½	.22⅝	.22⅝	.24⅝
Bunker Oil, 14 plus, delivered in barges	1.35	1.35	1.35	1.45	1.45	1.60
Diesel Oil at refinery, gal.	.03½	.03½	.03⅝	.03⅝	.03⅝	.04⅝
120-122 a.m.p. Wax	.04	.04	.04	.04	.04	.04⅝
New York Export Market—						
Motor Gasoline, in gallon cases	.24.4	.25.4	.25.4	.26.4	.27.4	.27.4
Motor Gasoline, U. S. Navy	.10.5	.11.5	.11.5	.12.5	.13.5	.13.5
Naphtha, 60° p., 59-61 spec. grav.	.12	.13	.14	.14	.16	.16
Standard white Kerosene, bulk, gal.	.07	.07	.07	.07	.07	.07
Standard white, in bbls., gal.	.14	.14	.14	.14	.14	.16
Standard white, in cases	.17.15	.17.15	.17.15	.17.15	.17.15	.17.15
Water white, in bulk	.08	.08	.08	.08	.08	.08
Water white, in barrels	.15	.15	.15	.16	.16	.16
Water white, in cases	.18.5	.18.5	.18.5	.18.5	.19.5	.18.5

Much Work But Poor Results in Mexico

More Completed Wells in First Half of 1924 Than in Any Period in Mexican Field History. Output Off

By George Blardone

TAMPICO, Mexico, July 16.—The production of petroleum in Mexico during the first half of 1924 resulted in 74,061,793 bbls. of which 54,136,261 bbls. were the heavier product of the country produced in the northern fields, while the south fields were responsible for 19,925,532 bbls. of the lighter gravity product. As the approximate production during the same period in 1923 was some 75,000,000 bbls., the decrease is, say, approximately 938,207 bbls.

To this production of 74,061,793 bbls. can be added 1,493,955 bbls of crude imported from the United States during the period under discussion. In the same period there was withdrawn from storage for distribution purposes say 3,658,721 barrels, which gives a total of 79,214,469 bbls. available for distribution during the six months just passed. This distribution is approximately as follows: Visible exports, 69,089,372 bbls.; domestic consumption, field and refining losses, etc., 10,125,097 bbls., which balances the total set forth above.

The total oil remaining in storage in the fields and in the ports of primary clearance in the republic at the end of the six months' period was 18,745,718, divided as follows: Heavy crude, 6,766,187 bbls.; light crude, 4,142,676; topped crudes, 6,908,078; distillates, 928,777. On January first of the present year the total was 22,404,439 bbls. In the withdrawals from storage all classes of oil, as outlined above, were reduced in fair proportion. It is rather significant that the last month of the six-month period should see a reduction of something over 4,000,000 bbls from the oils in storage say of June 1, of the current year. (Note: There had been a slight increase in storage prior to June 1, the January 1 figures considered).

With 379 wells completed during the first half of the present year, Mexico had more completions than it has ever recorded in the same length of time in its petrolific history There were 192 more wells completed than was the case in th same period in 1923. Of these completions 145 were ranked as commercial producers when they were finished, say 94 more producers than were completed in the same period in 1923. But there favorable comment ends and it useless to set down initial production of these pay completions, for, taken as a whole, their respective initial promises did not mean a great deal, owing to salt water invasions, especially in the Cacalilao sector of the Panuco Pool, which led the field in completions for the six months in question.

Reduced to a table, by fields, the completions follow:

Field—	Comp.	Init. Prod.
Panuco	291	107
South fields	38	18
*Miscellaneous	50	20
Total 6 mos., 1924	379	145
Total 6 mos., 1923	187	51
Increase 6 mos., 1924	192	94

*Ebano, Topila and other northern districts.

It cannot be said that efforts to locate distinctively new pools during the first half of the year resulted in much encouragement. In the last analysis there was not a great deal of wildcatting attempted, the Cacalilao sector of the Panuco Pool, where competitive drilling was necessarily the order of the day, accupying the center of the stage. In the Caracol district, just west of Tampico, three small wells were finished at considerable depth in the San Felipe. The failures there since drilling was commenced in 1923 has been five wells. There are three tests drilling there now. It is not an economic success at this writing, nor even a hopeful district. In the Culebra district, north of the Tamesi River, four more wells ere finished, all failures. Nor has any favorable results yet been obtained in other parts of Tamaulipas. In Los Cues, well south Topila, a deep duster was finished and other tests south of Panuco and Topila proper appear at this time too deep for hope. The Quebrache, just south of Topila and generally credited to that field, is making a little oil from a deep well finished in January, but its big producer (originally 3,500 bbls.), finished in 1923, went to fluid at the end of that year and such little marketable production a st is capable of now is secured as a result of dehydrating. With the exception of one 200-bbl. well the efforts of the Marland interests in the Hacienda Limon during the first half of the year were fruitless, but drilling is more active there now than heretofore. A test in the Guerrero district, to the southwest, was a duster.

Tbano is the most optimistic district in the entire northern fields, if not, indeed, in the entire Tampico embayment. It has steadily increased its production until today it could easily run 25,000 bbls. if it so desired. Its wells are not large, comparatively speaking, but they last.

Topila offered nothing of interest durin the period under discussion. El Barco, just east of the Lot 1 Calcalilao, a district checkerboarded between Mexican Gulf Oil Co and the Kern Mex Oil Fields, Ltd., finished, among a number of failures, three wells that were rated 2,000 bbls or better when completed. One of them, called 7,000 bbls. "initial head," went down in short order to 250 bbls. through a choker. It was too close to producers that were failing in Lot 1 Cacalilao and on the same structure.

As the second half of the year was ushered in Salinas-Tortuga, cut by the San Luis division of the National Lines north of Caracol, is a scene of activity with some 15 derricks up, some rigs already making hole. Northwest of here, in Corcovado, another wildcat is drilling. In La Canoa, bordering Lot 1 Cacalilao, on the northeast, two tests are drilling.

The above epitomizes the wildcat and near-wildcat operations in the northern fields.

Souths Fields Operations

The most encouraging work done in the south fields in near-wildcat territory during the past six months was Penn Mex Oil Co.'s operations in Alamo, say southeast of the older Alamo Pool. As a result Penn Mex has succeeded in bring its production back to say around 25,000

(Continued on Page 106)

TABLE NO. 2 — Prices Based on the Low Quotation as Carried in the Weekly Reports of The Oil and Gas Journal.

The First Six Months of 1924	January		February		March			April				May				June				Aver.
	19	26	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	6 mos.
	.10½	.10	.10¼	.10¼	.10	.10¼	.10½	.10¼	.10¼	.10	.10	.09¾	.09½	.09½	.09½	.09	.08½	.08	.08½	.09.8
	.10¾	.10	.10	.10¼	.10¼	.10¼	.10¼	.10¼	.10¼	.10½	.10	.09¾	.09¼	.09½	.09½	.09	.08½	.08	.08¾	.09.9
	.10½	.10½	.10¾	.10¾	.10½	.10½	.10¾	.10¾	.10½	.10½	.10¾	.10	.09½	.09¾	.09¾	.09¼	.08¾	.08¼	.09	.10.2
	.11¾	.11½	.10¾	.10¾	.10½	.11¾	.11¾	.11¾	.11¾	.11½	.11¼	.11	.10¾	.10½	.10½	.10¼	.09¾	.09¼	.10	.11.2
	.12¼	.12¼	.13	.13	.13½	.13¼	.13	.13	.12¾	.12¾	.12½	.11¾	.11¼	.11	.11	.10¾	.10¼	.09¾	.10½	.12.2
	.13¾	.13¼	.13½	.13½	.13¼	.13½	.13½	.13¼	.13¼	.13	.13	.12¾	.12¼	.12	.12	.11¾	.11	.11	.11¼	.12.9
	.11	.10½	.11	.11	.10¾	.10¾	.10¾	.11	.11	.10¾	.10½	.10	.09¾	.10	.10	.09¾	.09	.08½	.09	.10.5
	.10½	.10¼	.10¼	.10¼	.10¼	.10¼	.10¼	.10¼	.10¼	.10¼	.10	.09¼	.09¼	.09¼	.09¼	.09¼	.08½	.08	.08½	.09.8
	.10¾	.10½	.10¾	.10¾	.10¾	.10¾	.10½	.10½	.10½	.10½	.10¼	.09¾	.09¼	.10	.09¾	.09¼	.08¾	.08¼	.09	.10.2
	.13¾	.13½	.12¾	.12¾	.13	.13	.12¾	.12¾	.12¾	.12½	.12	.11½	.11	.11	.10¾	.10½	.10	.10	.10¾	.12.0
	.13¾	.13¾	.13¾	.13¾	.13½	.12¼	.12¼	.12¼	.12¼	.12	.12	.12	.12	.12	.12	.12	.11½	.11½	.11½	.12.1
	.14¾	.14¾	.14¾	.14¾	.14½	.13	.12¾	.12¾	.13¼	.13	.13½	.13¼	.13¼	.13¼	.12½	.12½	.12	.12¼	.12¾	.13.2
	.15¾	.15¾	.15¾	.15¾	.15¾	.14	.14	.14	.14	.13¾	.13¾	.13¾	.13¾	.13¾	.13¼	.13¼	.12¾	.12¾	.12¾	.14.0
	.17¼	.17¼	.17	.17	.17	.16½	.16	.16	.16	.15½	.15½	.15	.15	.15	.15	.15	.14¼	.14¼	.14½	.15.6
	.19	.19	.19	.19	.19	.18½	.18¼	.18¼	.18¼	.17¾	.17¾	.17½	.17½	.17½	.16¾	.16¾	.16¼	.16¼	.16¼	.17.8
	.10¾	.10	.10	.10	.10	.10	.09¾	.09¾	.09¾	.09¼	.09	.08¾	.08¼	.07½	.07½	.07	.06	.06¼	.07	.09.1
	.09¾	.09¼	.09¼	.09¼	.09	.09	.08¾	.08¾	.08¾	.08½	.08¼	.08	.07¾	.07¼	.07	.06¾	.06¼	.06	.06½	.08.4
	.08¾	.08¾	.08¼	.08¼	.08	.08	.08	.08	.08	.08	.07¾	.07½	.07	.07	.06¾	.06¼	.06	.05¾	.06¼	.07.7
	.10½	.10¼	.09½	.09½	.09½	.09½	.09½	.09½	.09½	.09¼	.09	.08½	.08	.07½	.07¼	.07	.06½	.06	.06¾	.08.9
	.08¾	.08¼	.08	.07¾	.07½	.07½	.07½	.07¾	.08	.07¾	.07¾	.07½	.07	.07	.06¾	.06½	.05¾	.05¾	.06¼	.07.6
	.10	.09¾	.10	.10	.09¾	.09¾	.09½	.09½	.09½	.09½	.09½	.09¼	.08¾	.09	.09	.08¾	.08¼	.08	.08¼	.09.5
	.10	.09¾	.10	.10	.09¾	.09¾	.09½	.09½	.09½	.09½	.09½	.09¼	.08¾	.09	.09	.08¾	.08¼	.07¾	.08	.09.4
	.05½	.05½	.04¾	.04½	.04½	.04½	.04½	.04	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04½	.04	.04	.04.6
	.05¾	.05¼	.05	.04¾	.04¾	.04½	.04½	.04¾	.04½	.04¾	.04¾	.04¾	.04¾	.04½	.04½	.04½	.04½	.04¾	.04¼	.04.9
	.06	.05¾	.05½	.05¼	.05	.04¾	.04½	.04½	.04¾	.04¾	.04¾	.04¾	.04¾	.04¾	.04½	.04½	.04¾	.04¼	.04¼	.05.1
	.05¾	.05¼	.05	.05	.04½	.04¼	.04	.04	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04¼	.04	.03¾	.03¾	.04.6
	.07⅛	.07⅛	.07⅛	.07⅛	.07⅛	.07	.07	.06¾	.06¾	.06¾	.06¾	.06¾	.06¾	.06¾	.06	.06	.06	.05¾	.05¾	.06.7
	.08	.08	.07½	.07½	.07½	.07¼	.07	.07	.07	.06¾	.06¾	.06¾	.06½	.06½	.06¼	.06¼	.06¼	.06	.06	.07.1
	1.00	1.00	1.00	.95	1.00	1.00	1.00	.90	.90	.95	.90	.85	.87½	.87½	.85	.85	.75	.75	.77½	.90.3
	1.15	1.20	1.20	1.15	1.15	1.15	1.10	1.15	1.15	1.05	1.00	1.00	1.00	1.00	.95	.95	.95	.90	.95	1.08
	.04¼	.04¼	.04¼	.04	.04	.03¾	.03¾	.03¾	.03½	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03.7
	1.10	1.10	1.07½	1.05	1.05	1.05	1.02½	1.02½	1.00	.95	.87½	.85	.85	.82½	.77½	.75	.72½	.75	.80	.97.3
	.03½	.03¾	.03¾	.03¼	.03	.03	.03	.03	.03¼	.03	.02¾	.02¾	.02¾	.02¾	.02½	.02¾	.02½	.02¾	.02¾	.02.9
	.04	.03¾	.03¾	.03½	.03½	.03½	.03½	.03½	.03½	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¾	.03½	.03.5
	1.15	1.20	1.20	1.10	1.10	1.10	1.05	.90	.92½	.90	.85	.85	.85	.80	.80	.77½	.77½	.77½	.80	.98
	.03½	.03¼	.03¼	.03¼	.03⅛	.03	.03	.02¾	.03¼	.03⅛	.03	.02¾	.02¾	.02¾	.02½	.02¾	.02¼	.02½	.02¾	.03
	.04	.03¾	.03¾	.03¾	.03¾	.03¾	.03½	.03½	.03½	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03¼	.03⅜	.03.5
	.05	1.00	1.00	1.00	.95	.90	.90	.92½	.95	.95	.90	.90	.90	.90	.90	.90	.87½	.85	.85	.94.6
	.04¾	.04½	.04½	.04¾	.04¾	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.04¾	.04½	.04	.04.6
	1.75	1.75	1.70	1.70	1.75	1.85	1.80	1.95	1.95	1.90	1.90	1.90	1.85	1.80	1.80	1.80	1.75	1.75	1.60	1.70
	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05⅝	.05⅝	.05⅝	.05¼	.05¼	.05¼	.05⅛	.05⅛	.05⅛	.05.2
	.06	.06	.06	.06	.06	.06	.05⅝	.05⅝	.05⅝	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05⅝	.05⅝	.05⅝	.05.7
	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.5	.05.4
	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.13	.13	.12½	.14.1
	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.13½	.13½	.13	.15.2
	.13½	.13½	.13½	.13½	.13½	.13⅝	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.12	.11½	.12	.12.5
	.14⅜	.14⅜	.14½	.14½	.14½	.14⅝	.14½	.14½	.14½	.14½	.14½	.16½	.14½	.14⅜	.14⅜	.14⅜	.12½	.12⅜	.12	.13.8
	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.15	.15	.14½	.15.4
	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.27.4
	.04	.04	.04	.04½	.04½	.04½	.04¾	.04¾	.04¾	.04¼	.05¼	.05	.04¾	.04½	.04¾	.04½	.04	.03¾	.03¾	.04.2
	.06¼	.06¼	.07¼	.08	.08½	.09	.09	.09	.09	.09	.09	.09	.09	.08½	.08¼	.08¼	.07½	.07	.07	.07.3
	.26	.26	.27	.27	.29	.29	.30½	.30½	.30½	.30½	.30½	.28	.28	.27	.27	.27	.26½	.25½	.25½	.27.1
	.38½	.38½	.38½	.38½	.40	.40	.38½	.38½	.38¾	.38½	.38	.38	.38	.36½	.36½	.36½	.35⅝	.35⅝	.35½	.37.2
	.14	.14	.14	.14	.14	.14½	.14½	.15⅛	.15⅛	.15⅛	.15	.15	.15	.15	.15	.15	.14½	.14¼	.14¼	.14.2
	.11⅜	.12½	.12½	.12½	.12½	.12½	.12½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13⅜	.13	.13	.13	.12.5
	.16	.16	.16	.16½	.16½	.16½	.16½	.16½	.16½	.15½	.14½	.15	.15	.15	.14⅜	.14⅜	.14	.14	.14½	.14.6
	.40½	.40⅜	.40½	.40½	.40½	.40⅜	.40½	.40½	.40½	.40½	.40½	.45	.45	.45	.45	.45	.45	.45½	.45⅜	.41.3
	.48	.48	.48	.48	.48	.48	.48	.48	.48	.49½	.49½	.49½	.49½	.49½	.49½	.49½	.49½	.49⅜	.49⅜	.47.8
	.24⅜	.24½	.24½	.24½	.24½	.24½	.24½	.24½	.24¼	.24¼	.30	.30	.30	.30	.30	.30	.30	.31	.31	.26.6
	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.62.5
	.04	.04	.05	.05	.05	.05	.05	.05	.05	.06	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.05½	.04.7
	.04½	.04½	.04½	.04⅛	.04¼	.04½	.04½	.04½	.05	.05½	.06¼	.06¼	.06¼	.06¼	.06¼	.06¼	.06¼	.05	.05	.04.9
	.27.4	.27.4	.27.4	.27.4	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.28.15	.27.5
	.13.5	.13.5	.13.5	.13.5	.14.25	.14.25	.14.25	.14.25	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.13.5
	.15	.16	.15	.15	.16	.16	.16	.16	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.28	.15.0
	.07	.07	.07	.07	.07	.07	.07	.07	.07	.06½	.06½	.06½	.06¼	.06¼	.06½	.06½	.06½	.06½	.06½	.06.5
	.14	.14	.14	.14	.14	.14	.14	.14	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13½	.13.8
	.17.15	.17.15	.17.15	.17.15	.17.15	.17.15	.17.15	.17.15	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.16.9	.17.0
	.08	.08	.08	.08	.08	.08	.08	.08	.07½	.07½	.07½	.07¼	.07¼	.07¼	.07¼	.07½	.07½	.07½	.07½	.07.8
	.15	.15	.15	.15	.15	.15	.15	.15	.14½	.14½	.14½	.14¼	.14¼	.14¼	.14¼	.14½	.14¾	.14¾	.14¾	.14.8
	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.18.5	.17.9	.17.9	.17.9	.17.9	.17.9	.17.9	.17.9	.17.9	.18.3

Central West Shows Decline in Results

Completed 526 Fewer Wells in First Half Than in Same Period Last Year. Several New Pools Opened This Year

By George A. Whitney

The Central West Field had a very bright prospect for new development work at the start of 1924, and would, without doubt, have shown a great many more completions the first six months of the year, had conditions been such that work could have been done. Excessive rains made it almost impossible to move material over the leases on account of deep mud.

Outside of Kentucky and Central Ohio, crude prices have remained stationary in the field which covers a vast area of territory, combining work in northwestern and central Ohio, Indiana, Illinois, Michigan, Kentucky, Tennessee, Mississippi, Alabama, Georgia, and Florida. In the territory south of Kentucky little was accomplished, completed wells having been reported only from Tennessee and Mississippi, as wells in Alabama, Georgia and Florida were held up by one thing or another and many were shut down at various depths at the close of the report.

The western Kentucky division takes the lead by a large margin in completed work for the period, with central Ohio second, Lima Field, third; eastern Kentucky, fourth; other fields showing but few new wells.

The two wells in Jackson and Monroe Counties, Michigan, are still uncompleted. The Petersburg Field, in Monroe County, has two producing wells that were completed four years ago, which are the only known commercial wells in the State.

Outside of a well or two found below the Pencil Cave sand in the Kettle Creek Field of Cumberland and Monroe Counties, Kentucky, the best of which showed 1,500 bbls. flush production, the greatest well was found in the old Lima Field. It was completed in April by the Zorn-Hornung Oil Co. This was No. 7 on the Mary Schott farm, in the Elmore Field, Harris Township, Ottawa County, which produced better than 1,000 bbls. from the Trenton Rock the first 24 hours. It was the biggest initial producer the Lima Field had had in 20 years. Thousands upon thousands of people visited the gusher. Since then nothing but usual sized wells have been found there. The gusher produced from a crevice, which accounts for the large output.

Outside of the Elmore Field gusher, the next best Trenton Rock well in the Lima Field of northwestern Ohio, was struck by the Sun Oil Co., in No. 3 S. A. Barhoff, Eden Township, Seneca County, Tiffin Field, in March, with a production of 400 bbls. flush, which was also a crevice well.

Opened a New Pool

It was in January that people awoke one morning and discovered that a new producing area had been opened up to the south of the old Lima Field's boundary and while only a small producer, led the way to what may develop into a several mile extension. This well was drilled by natives, the Eilerman Brothers, who purchased an old drilling outfit and started a well on the Eilerman farm, in Cynthian Township, Shelby County, and near the Hamlet of Newport. Not being practical drillers, it required a long period to complete the well, but with the opening of the first month of 1924, the well came in good for 8 bbls. natural, and it was not until April that the Harmon-Miller interests brought in No. 1 Charles Broeman, nearby the Eilerman well, that was reported around 100 bbls. flush.

The north side of the old Trenton line that had not been thoroughly tested, also came in play early in the year, when the U. S. A. Oil Co. took it for granted that oil could be found around the little town of Payne, in the western portion of Paulding County, and to satisfy stockholders development work was started with a result the close of June showed some very excellent wells, starting out at from 40 to better than 100 bbls. flush, making it the most talked of field in the Lima area at this time. The best wells in the Payne Field were the Washington Court House Oil Co.'s No. 1 D. R. Ryle, in Benton Township, close to 1 mile west of Payne, and the Harmon-Miller Oil Co.'s No. 1 Clara Granham, nearby. Both wells were estimated at 100 bbls. each.

In January gas was found in Butler Township, Mercer County, in the western part of the Lima Field, also a showing of oil, but it was up to O. J. McGuiggan and others to find the oil when they drilled in No. 1 Joseph Winning farm, a flush production of 65 bbls. a day. Another important strike in the Lima Field was made by Stelzer & McClure, in a test on the Kenyon-Foornatter farm, in York Township, Van Wert County, which showed a production of 80 bbls. at a depth of 1,239 feet. Another interesting find was made by Charles F. Zeising and others in April, when No. 1 F. Overmyer, in Lake Township, Wood County, came in for 75 bbls., the best well found in that township for many years. In May the U. S. A. Oil Co. drilled a test on the M. & D. Lamb, Harrison Township, Paulding County, about 3 miles to the northeast of the Payne Pool, and found salt water, with a showing of oil.

Gas Operations

The gas companies were not as active in the Central Ohio Field as was usually the case, although they maintained their work steadily during the first six months. The gas wells were not prolific like they were some years ago, although numerous tests proved worth while. The gas companies have opened up new oil areas where least expected, in parts of Hocking, Holmes, and Wayne Counties, wells showing from 20 bbls. up to 85 bbls. from the deep Clinton formation.

Outside of one good well drilled by Mann, Huber & Tichenour, on the Reeves farm, in Center Township, Gibson County, in the Princeton district, with a production of 120 bbls., the Hotmire Pool, in Pike Township, Jay County, furnished most of the thrills of production. Some very fine wells have been found in the Hotmire Pool. In January, Masters, Bundy and others' No. 8 C. Rathbun produced 239 bbls. flush. In February, Jack Colt entered the field, purchasing an interest with N. E. Masters and under the name of Masters & Colt brought in No. 13 A. Ritenour for 160 bbls. In March, this firm's Nos. 16 and 17, Ritenour, were credited with flush of 240 and 200 bbls. respectively, while in April, No. 18 showed 200 bbls. In March, N. E. Master's No. 1 Oleson was reported at 120 bbls. In April, the Omar Oil & Gas Co.'s No. 9 J. E. Mock, same pool, showed 250 bbls. and No. 10, completed in May, showed 200 bbls.

In the Illinois Field

It was not until in May that the Illinois Field came to the front with wells of any magnitude. During that month the Trenton Rock Oil Co.'s No. 5 E. R. Ault, in Martinsville Township, Clark County, produced 105 bbls. flush, and in Wabash Township, Wabash County, the Arkansas Fuel Oil Co.'s No. 5 Della Wright farm, produced 140 bbls. flush, and it was upon this lease that the discovery well of the Wright Pool was found some three years ago. In the same general area Mack Leighty and others' No. 1 Holson-Dorsey farm, produced 120 bbls. flush and Timberlake and others' No. 2 J. T. Smith, 110 bbls.

Kentucky, both the Eastern and Western Fields are holding up in their development work, not rushing the drill by any means, but going along just as though the price of crude had not taken a drop. Had the price gone up, instead of down, there would have been a large development work. Wildcatters are doing but little at this time. The Weir sands of the Big Sandy Valley are the main attraction in the extreme eastern portion, while the Idamay Section of Lee County, along the Owsley County line, is developing some large producers, for a county that was supposed to be completely drilled over. Kentucky is still considered a field where future developments will yield new pools.

It was on May 7, 1924, that the Union Gas & Oil Co. made a record in the North Weir sand area of Lawrence-Johnson Counties, in the Eastern Kentucky Field, by the completion of its five-hundredth well on its large block of acreage. Out of the 500 completed wells, 425 were oil producers, 68 gas wells and 7 dry holes. This record will stand for some time in Kentucky, although the Petroleum Exploration Co., which has done a world of wildcatting over the State, made a great showing in its work on its big acreage some years ago in Estill, Powell and Lee Counties.

Six Months' Work

During the first six months of 1924, a total of 1,387 wells were completed in the Central West Field, of which 814 were oil producers, with a flush of 23,334 bbls., 340 dry holes and 233 gas wells. There were 377 old wells abandoned. These wells were distributed among the various fields as follows:

CENTRAL WEST FIELD
Summary of Completed Work in the First Six Months of 1924

Field—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
Lima	254	5,031	34	18	228
Central Ohio	282	876	75	178	0
Indiana	75	2,763	25	6	119
Illinois	61	1,650	19	0	30
Eastern Kentucky	222	4,339	18	24	0
Western Kentucky	479	8,560	158	7	0
Tennessee	12	115	9	0	0
Mississippi	2	0	2	0	0
Total	1,387	23,334	340	233	377
First half 1923	1,913	29,169	458	169	224
Difference	526	5,835	118	64	153

DISTRIBUTION OF WELLS

The following tables give the wells completed monthly, number of oil producers, production, dry holes, gas wells, abandoned wells and the number in each county of each field for the period as follows:

LIMA
Completions by Month, First Half 1924

Month—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
January	31	641	4	2	39
February	27	252	4	4	13
March	36	839	4	7	34
April	38	1,658	6	2	62
May	59	577	10	2	56
June	63	1,070	6	1	25
Total	254	5,037	34	18	228
First half 1923	325	6,341	32	5	158
Difference	71	1,304	2	13	70

The above wells for the first half of 1924 were distributed among the various counties as follows:

County—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
Wood	63	888	11	0	87
Hancock	28	547	0	3	13
Allen	18	206	1	0	44
Auglaize	11	147	2	0	22
Sandusky	5	25	0	0	43
Mercer	49	547	7	3	6
Van Wert	6	157	0	1	1
Seneca	7	435	5	0	2
Lucas	3	0	1	2	3
Ottawa	30	1,297	1	0	3
Darke	10	167	2	0	0
Hardin	8	0	0	8	0
Shelby	9	171	3	1	0
Paulding	7	450	1	0	0
Total	254	5,037	34	18	228

CENTRAL OHIO
Completions by Months for First Half 1924

Month—	Comp.	Prod.	Dry	Gas
January	50	43	17	31
February	51	152	18	29
March	56	90	16	20
April	43	242	9	20
May	59	268	15	33
June	24	81	0	19
Total	282	876	75	178
First half 1923	239	730	70	110
Difference	43	146	1	62

Completions by District

County—	Comp.	Prod.	Dry	Gas
Licking	1	0	0	1
Knox	14	3	4	3
Ashland	17	0	9	14
Medina	30	2	15	14
Lorain	7	0	0	7
Wayne	64	467	13	35
Richland	60	0	14	46
Vinton	1	0	0	1
Hocking	5	140	2	3
Holmes	28	240	7	14
Coshocton	2	24	1	0
Jackson	12	0	3	9
Athens	25	0	6	19
Meigs	3	0	1	2
Huron	4	0	2	2
Cuyahoga	3	0	1	2
Summitt	3	0	2	1
Total	282	876	75	178

INDIANA
Completions by Month, First Half of 1924

County—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
January	18	559	6	1	10
February	5	380	1	0	33
March	12	743	4	0	43
April	7	515	1	0	1
May	21	423	7	4	23
June	12	145	6	1	9
Total	75	2,763	25	6	119
First half 1923	83	1,763	23	0	97
Difference	8	1,000	2	6	22

Completions by District

County—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
Wells	1	0	1	0	53
Jay	39	2,438	7	3	37
Adams	1	3	0	0	20
Grant	1	15	0	0	0
Delaware	2	10	1	0	4
Randolph	1	20	0	0	0
Gibson	11	232	5	0	7
Pike	3	19	1	0	3
Sullivan	5	0	4	1	0
Knox	3	5	2	0	0
Parks	1	10	0	0	0
Newton	1	12	0	0	0
Cass	1	0	1	0	0
Clay	1	0	1	0	0
Decatur	1	0	0	1	0
Dubois	1	0	1	0	0
Harrison	1	0	0	1	0
Laporte	1	0	1	0	0
Total	75	2,763	25	6	119

ILLINOIS
Completions by Month, First Half of 1924

Month—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
January	2	25	1	0	6
February	4	110	1	0	6
March	5	6	3	0	6
April	9	107	3	0	1
May	17	657	6	0	3
June	24	735	5	0	4
Total	61	1,650	19	0	30
First half 1923	156	3,788	59	2	29
Difference	95	138	40	2	1

Completions by District

County—	Comp.	Prod.	Dry	Gas	Old Wells Abd.
Clark	22	780	2	0	6
Crawford	10	35	3	0	1
Lawrence	4	29	1	0	13
Marion	4	180	1	0	8
Monroe	3	20	2	0	0
Wabash	11	576	5	0	0
Coles	3	0	3	0	0
Jackson	2	30	0	0	0
Jefferson	1	0	1	0	0
Douglas	1	0	1	0	0
Total	61	1,650	19	0	30

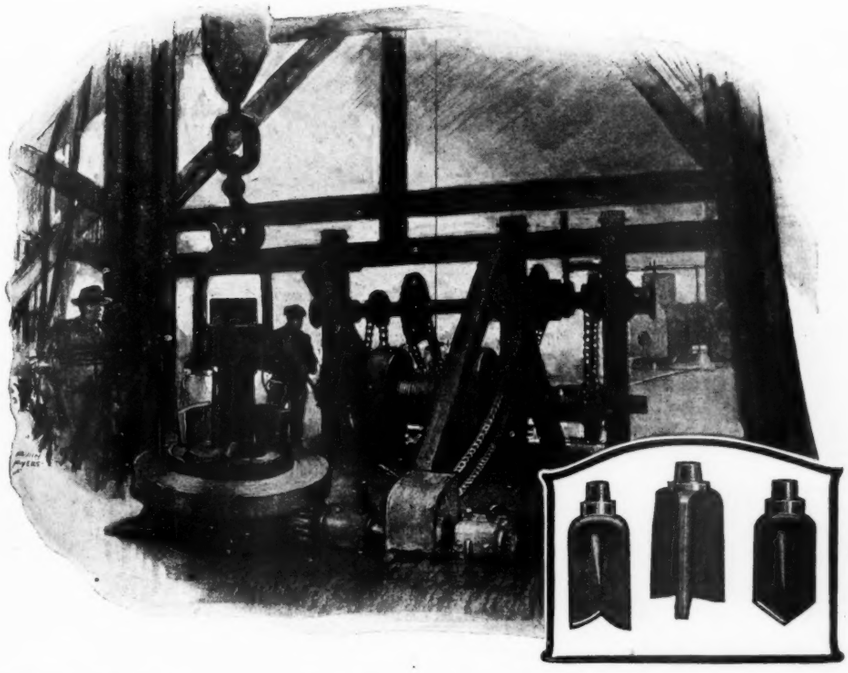
KENTUCKY FIELD
Completions by Month, First Half 1924

Month—	Comp.	Prod.	Dry	Gas
January	56	568	15	7
February	116	1,095	16	7
March	118	2,400	33	3
April	167	1,929	32	7
May	174	4,075	38	8
June	178	2,832	43	9
Total	701	12,899	176	31
First half 1923	1,082	16,432	248	44
Difference	382	3,534	72	13

Completions by Districts

County—	Comp.	Prod.	Dry	Gas
Wayne	15	85	6	0
Powell	6	57	1	1
Estill	7	30	3	0
Morgan	4	0	1	3
Lee	37	1,628	3	0
Lawrence-Johnson	55	1,834	0	3
Johnson-Magoffin	62	473	1	0
Allen	121	2,061	46	6

(Continued on Page 104)



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AGATHON ALLOY STEELS

Oklahoma Output Steadily Increased

Production Was Less Than in Same Period Last Year, But in Excess of That of Last Half of 1923

By James McIntyre

Oklahoma produced 80,024,008 bbls. of crude petroleum in the first six months of 1924. This is 5,338,536 bbls. less than its production for the first half of 1923, but it is 372,867 bbls. in excess of the production of the last six months of 1923. Also it is about 10,000,000 bbls. in excess of what even optimistic oil statisticians figured it would be.

In another story in this edition reviewing the events of the first half of the year in Oklahoma, the causes leading to Oklahoma's unexpectedly large production are clearly given, and will not be repeated here. The closing month of the year 1923 showed Oklahoma with a production of 12,232,259 bbls., or an average of 394,589 bbls. Six months later, or the closing month of the first half of 1924 saw Oklahoma with a production of 14,457,390 bbls. or 481,913 bbls. a day, an average of 87,324 bbls. a day higher than at the close of last year.

New Fields and Deeper Drilling

New fields and deeper drilling in old fields were responsible for the increase in production and good geology, faith in that science, a very considerable increase in the price of crude early in the year and the universal hope in a big year for gasoline consumption were responsible for the drilling campaign that brought about the results shown in the figures.

From the dawn of the new year production in Oklahoma has been consistently mounting, and at the close of the half year there was no sign that it would soon appreciably decline. The production of Cromwell, in Seminole County, for example, which in June was 25,719 bbls. a day promises to average about 40,000 bbls. a day in July, while the Tonkawa, Papoose, Stroud, and Wewoka Pools are all expected to more than hold their own for a part of the second half of the year, and the wildcatter is still at it, notwithstanding the handicaps under which he is working, including the danger of being unable to find a purchaser for his crude should he get production.

There has never been a time in the history of the State when so many favorable looking leases were being explored as at present and the territory south of the city of Okmulgee, in Okfuskee, Seminole, Hughes, and Pottawatomie Counties, is being given a very thorough test by many operators who have better reasons to think they may find oil than in most wildcat operations. For that reason it does not look at this time as though Oklahoma would fall off in production to a very great extent the balance of the year, although it may not produce in the last six months as much crude as it did in the first half.

Average per Well

There were 57,735 oil producing wells operating in Oklahoma at the close of June and these averaged 8.35 bbls. a day for that month. Last January 57,217 producing wells averaged 6.98 bbls. a day.

Subtracting all the wells in the State that averaged below the general average of 8.35 bbls. a day, we find that there were 45,047 such wells in 19 different fields or pools. The remaining 12,688 wells in June produced 368,873 bbls. a day, of 29 bbls. per well.

In the closing month of the half year, Stroud, in Lincoln County, showed the largest average daily production per well, 1,032.55 bbls. Cromwell had a record of 829.65 bbls. per well; Otoe or Watchorn, in Pawnee County, 156.33 bbls. per well. Other pools showing a very considerable production per well were Burbank, Osage-Kay, 60.85 bbls.; Wewoka, Seminole County, 146.66 bbls.; Wetumka, (Papoose) Hughes County, 196 bbls.; Bristow, Creek County, 49.76 bbls.; Tonkawa, Kay and Noble Counties, 53.85 bbls.; Graham, Carter County, 105.26 bbls. The once great Cushing Field, in Creek County, is down to 9.23 bbls. per well and the earlier Glenn Pool, which up to its time was the largest high grade producer in the world, is down to an average of 3.25 bbls. per day after less than 20 years' of life.

Leading Fields

For the period of the half year, Burbank, in Osage and Kay Counties, led all Oklahoma Fields for quantity production, with atotal of 17,089,573 bbls. The Bristow Field was second with 7,718,164 bbls., but the greater Bristow Field, which would include Eastern Bristow or Slick had a combined production of 8,953,529 bbls. Tonkawa was third with 6,698,999 bbls. and Cushing fourth, with 4,413,782 bbls. Seventeen segregated districts listed produced over 1,000,000 bbls. a month each during the six months.

Cromwell the Big Sensation

Cromwell had the most sensational rise. In January its total production was 10,478 bbls., while in June it was 771,570 bbls. Stroud increased from 65,875 bbls. in January to 681,480 bbls. in June. Otoe or Watchorn was not important enough in January to segregate it but by June it produced 163,000 bbls. Wetumka produced 23,250 bbls. in January and 229,320 bbls. during June. These were the most noteworthy increases for the year, although the Graham Field in Carter County, which is not a new development produced in June 502,380 bbls. as against 397,885 bbls. in January, the increased production coming from wells that extended the pool.

One of the important features of the production report is that showing the number of producing oil wells in each pool and the average production per well. The figures tell a very interesting and illuminating story, and are well worth careful study.

OKLAHOMA

Average Daily Production by District for the Month of June 1924

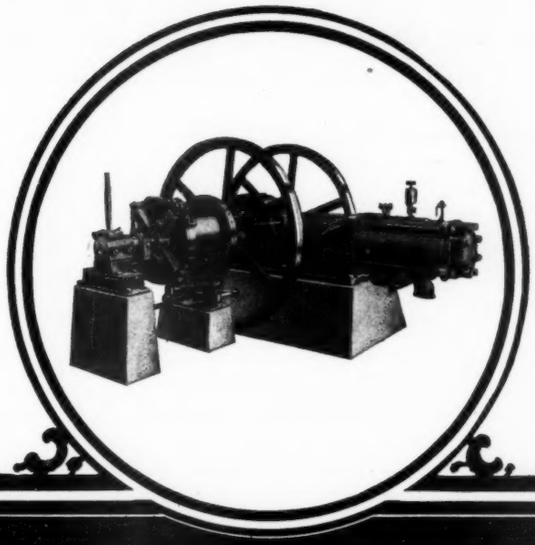
County or Pool—	No. oil wells	Average daily Production Bbls.	Av. daily production per well Bbls.
Washington County	8,353	7,111	.85
Nowata and Rogers Counties	13,462	6,214	.46
Burbank	1,509	91,819	60.85
Other Osage County Fields	7,753	46,216	5.95
Bird Creek, Owasso, etc.	2,912	4,769	1.64
Bruner, Red Fork, Turkey Mountain	682	5,616	8.23
Jenks, Bixby and Leonard	986	2,182	2.21
Broken Arrow	355	649	1.83
Mounds, Beggs, Hamilton Switch and Youngstown	1,324	11,011	8.32
Bald Hill	987	2,241	2.27
Okmulgee-Morris	1,546	3,018	1.95
Henryetta, Schulter and Tiger Flats	423	2,681	6.34
Muskogee and Wagoner Counties	1,019	2,612	2.56
Wewoka	56	8,202	146.46
Cromwell	31	25,719	829.65
Deaner-Lyons	468	5,511	11.78
Okemah	36	599	16.64
Wetumka (Papoose)	39	7,644	196.00
Weleetka	6	198	33.00
Stroud	22	22,716	1,032.55
Cushing-Shamrock	2,599	23,981	9.23
Glenn-Sapulpa and Kiefer	3,065	9,931	3.25
Bristow, Kelleyville and Depew	886	44,187	49.76
Eastern Bristow	737	7,060	9.58
Cleveland-Keystone	909	4,241	4.67
Jennings	335	3,302	9.86
Otoe or Watchorn	15	2,345	156.33
Yale, Quay and Ingalls	403	5,440	13.47
March Pool or North Cushing	89	1,207	13.56
Tonkawa	681	36,674	53.85
Blackwell and Deer Creek	177	2,770	15.65
Mervine	85	584	6.87
South Ponca	71	1,005	14.15
Billings	65	589	9.06
Garber	546	5,210	9.54
Healdton	1,978	16,575	8.39
Hewitt	780	19,879	25.48
Fox	83	3,120	37.59
Graham	159	16,746	105.26
Brock	43	942	21.91
Loco-Milroy	820	2,551	3.11
Tussy or Sholom Alechem	5	182	36.40
Duncan	462	8,011	17.34
Walters	207	1,120	5.41
Comanche	47	1,057	22.49
Kilgore	14	195	13.93
Cement	145	1,967	13.50
Robberson	191	3,676	19.24
Sayre	10	345	34.50
Allen	169	293	1.73
Total for June	57,735	481,913	8.35

NEW COMPRESSOR OUTFIT

Technical Sheet No. 114, published for the Novo Engine Co., Lansing, Mich., describes the company's EFH air compressor outfit, which is portable and which has all parts readily accessible. A Novo four-cylinder gasoline engine is used to develop the power necessary for the operation of the outfit. Two other sizes, of 45 and 40 cubic feet displacement, respectively, are being built by the Novo Engine Co. also.

Production of Oklahoma by Month and by Field for the First 6 Months of 1924

County or Pool—	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total 6 months Bbls.
Washington County	220,441	206,161	223,014	213,480	223,834	213,330	1,300,060
Nowata and Rogers Counties	189,720	177,654	190,278	186,390	191,162	186,420	1,121,614
Burbank	2,416,357	2,964,264	3,080,718	3,175,920	2,697,744	2,754,570	17,089,573
Other Osage County fields	1,037,725	984,405	1,306,650	1,307,340	1,675,519	1,386,480	7,698,109
Bird Creek-Owasso	1,037,725	139,664	149,482	143,310	148,552	143,070	873,653
Bruner, Red Fork, Turkey Mountain, etc.	74,648	85,376	131,750	126,360	101,525	168,480	688,139
Bixby, Leonard and Jenks	70,308	64,119	68,572	66,030	67,983	65,460	402,472
Broken Arrow	21,390	19,952	21,173	19,980	19,840	19,470	121,805
Mounds, Beggs, Hamilton Switch and Youngstown	381,672	326,076	344,255	332,340	343,882	330,330	2,058,556
Bald Hill	81,065	63,829	76,570	68,880	70,773	67,230	428,347
Okmulgee-Morris	109,027	102,370	93,434	90,570	101,246	90,540	587,187
Henryetta, Schulter and Tiger Flats	71,920	69,397	86,769	81,300	82,553	80,430	472,369
Muskogee and Wagoner Counties	61,070	57,884	66,650	85,950	80,972	78,360	430,886
Wewoka	330,553	290,493	278,876	228,150	245,613	246,060	1,619,745
Cromwell	10,478	15,747	144,460	196,200	513,763	771,570	1,652,218
Deaner-Lyons	164,455	154,280	162,936	157,590	164,610	165,330	969,201
Okemah	23,870	19,430	16,213	19,350	18,662	17,970	115,496
Wetumka	23,250	15,805	34,565	27,840	68,696	229,320	399,476
Weleetka	8,928	6,351	6,665	6,030	6,200	5,940	40,114
Stroud	65,875	113,390	138,353	178,320	510,136	681,480	1,687,554
Cushing-Shamrock	749,797	698,494	747,656	732,300	766,196	719,430	4,413,783
Glenn Pool, Sapulpa and Kiefer	307,382	288,519	308,419	298,260	307,086	297,930	1,808,020
Bristow, Kelleyville and Depew	1,211,976	1,174,761	1,290,096	1,369,980	1,346,741	1,325,610	7,718,164
Eastern Bristow or Slick	211,265	191,690	183,458	215,130	222,022	211,800	1,235,365
Cleveland-Keystone	132,277	124,642	133,145	127,680	131,564	127,230	776,538
Jennings	104,222	97,614	104,408	99,360	102,517	99,060	607,181
Otoe or Watchorn	.....	22,678	24,025	31,590	50,096	70,350	198,739
Yale, Quay and Ingalls	169,725	158,949	170,841	163,680	167,958	163,200	994,353
March Pool (North Cushing)	55,335	51,356	59,866	56,030	36,859	36,219	295,664
Tonkawa	1,227,414	1,113,774	1,107,320	1,098,720	1,091,541	1,100,220	6,698,999
Blackwell and Deer Creek	65,565	75,864	86,862	84,330	85,932	83,100	481,653
Mervine	24,025	15,370	17,205	15,960	18,228	17,520	108,308
South Ponca	29,946	29,348	31,620	29,910	31,248	30,150	182,222
Billings	16,647	16,820	18,414	17,700	18,383	17,670	105,634
Garber	165,726	151,670	163,711	154,590	161,882	156,300	968,879
Healdton	506,199	476,354	501,146	503,040	518,010	497,250	3,001,999
Hewitt	660,889	591,919	614,575	593,070	642,537	596,370	3,699,360
Fox	83,049	87,754	93,248	98,310	96,689	93,600	552,650
Graham	397,885	365,400	447,764	503,550	489,366	502,380	2,706,345
Brock	30,070	26,158	24,862	33,300	29,357	28,260	172,007
Milroy	17,329	15,663	16,554	16,560	15,841	15,330	97,277
Duncan	263,717	246,471	256,711	240,150	249,922	240,330	1,497,301
Walters	34,720	32,364	34,069	33,090	35,216	33,600	202,059
Comanche	18,662	17,719	28,210	30,780	32,953	31,710	160,034
Kilgore	6,231	5,887	3,875	5,280	6,076	5,850	33,199
Loco	60,884	56,840	60,698	61,350	63,178	61,200	364,150
Cement	62,279	58,174	60,109	58,680	60,822	59,010	359,074
Robberson	140,523	129,021	124,217	110,040	114,328	110,280	728,409
Sayre	15,531	27,550	12,400	8,790	10,943	10,350	85,564
Allen	11,036	10,295	10,075	9,690	8,990	8,790	58,876
Tussy or Sholom Alechem	.....	.....	.....	.....	3,720	5,460	9,180
Total	12,292,833	12,236,637	13,336,851	13,452,240	14,248,057	14,457,390	80,024,008
Total first 6 months 1924	13,328,574	12,445,020	13,958,828	14,299,610	15,658,782	15,572,730	85,362,544
Difference	1,035,741	208,383	621,977	847,370	1,410,725	1,115,340	5,338,536



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Quiet Half Year in North Central Texas

Production Less Than in Same Period Last Year. Archer County the Feature Field With 703 Completions

By Dan F. Dugan

The North Central Texas field produced no rapid fire changes or startling sensations during the first six months of this year. Development work showed a small increase and initial production about balanced with the initial showing made during the first six months of 1923. There was completed during the first six months of this year 1,514 wells as against 1,615 for the first six months of 1923, a decrease of 101. The completions reported during the first six months of this year produced 119,255 bbls. initial production as against 119,200 bbls. for the corresponding period of 1923 a gain of only 55 bbls. Dry holes numbered 538 as against 466 for the similar period last year an increase of 72; gas wells reported 33 as against 34 in the same period last year, a loss of one. The comparative figures show but little difference as the result of the field work for the first six months of 1924 and 1923.

The last six months of 1923 as compared with the first six months of 1924 is a different story, during the last half of 1923, there was a lull in all branches of the industry. During the month of November development reached its lowest ebb with a total of only 75 completions showing an initial production of 7,418 bbls. During December the field came back a little with 117 completions but the initial production continued low, only 7,141 bbls. having been reported. With the beginning of 1924 the operators began to bestir themselves and the comparative figures show radical differences in the totals of the development work for the last six months of 1923, and first six months of 1924. During the last six months of 1923 the completions numbered 1,051 as against 1,514 for the first six months of 1924, initial production last six months 1923 was only 66,626 bbls. as against 119,255 bbls. first six months of 1924, a difference of 52,629 bbls. Dry holes numbered 393 last six months 1923. For the first six months of 1924 there were reported 538, a difference of 145. The wide spread in development during the last six months of 1923 and the first six months period of 1924 can be easily traced to the increased development in Archer County which completed nearly double the number of wells in the first half of this year it did during the entire 12 months of 1923 and 46 per cent of the total completions for the entire field during the first six months of 1924.

Archer County also did itself proud in the amount of initial production reported with a total of 79,978 bbls. for the first six months of 1924, eclipsing the total initial production for the entire field for the last six months of 1923 by 13,352 bbls.

Production for the first six months of 1924 totaled 21,646,236 while during the same period in 1923, 23,411,818 bbls. was reported, a loss of 1,765,582 bbls.

Reagan County in Limelight

During the past six months Reagan County furnished the only test that caused any excitement among the operating fraternity. It is located 200 miles southwest from the main producing pools. In the first six months review of 1923 the following reference was made to Reagan County: "The Texon Land & Development Co.'s No. 1 University Land drilled into an oil bearing formation on May 28. The test is showing some gas and is flowing by heads with an estimated production of 75 to 100 bbls. a day at 3,050 feet." During the past 12 months the Texon Land & Development Co. disposed of 16 sections of leases surrounding the well to the Big Lake Oil Co. (Benedum & Trees interests) of Pittsburgh, Pa., the present owners during the 12 months interim have drilled about 10 other tests, at least, two of which were disappointments, five were small producers averaging around 75 bbls. each daily, but the big climax came on June 20 when No. 9, drilling around 2,982 feet, penetrated the pay and the result of the owners' efforts was a gusher that gauged slightly in excess of 50 bbls. an hour and has held its initial showing up to the time of the compiling of this review.

NORTH AND CENTRAL TEXAS
Production by Months and by Districts for the First Six Months of 1924

Field—	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total 6 months Bbls.
Burkburnett	658,285	603,084	640,956	614,970	620,589	589,020	3,726,904
Electra	616,962	553,552	599,385	603,690	642,041	632,370	3,648,000
Iowa Park and K.M.A.	73,036	71,485	84,351	100,890	120,621	142,860	593,243
Holliday and Archer County	630,850	707,890	842,518	1,008,480	1,049,381	949,740	5,188,859
Petrolia	9,052	8,758	8,339	10,050	8,339	8,310	52,848
Breckenridge	379,967	359,194	377,053	377,010	385,206	246,650	2,225,080
Caddo	141,980	136,590	152,489	171,690	200,260	190,260	993,269
Clear Fork	225,618	244,064	232,035	228,810	232,035	258,120	1,420,682
Gunsight	2,108	2,001	2,511	2,190	2,821	2,160	13,791
Ranger - Eastland	264,740	246,471	275,342	264,030	258,075	235,200	1,543,858
Desdemona	93,589	91,060	98,456	105,570	93,425	94,800	581,900
Rising Star	3,410	2,958	3,472	3,780	3,038	3,030	19,688
Sipe Springs	7,440	6,061	6,944	6,630	6,820	6,210	40,105
Pioneer	63,860	62,901	70,215	72,000	70,153	61,590	400,719
Carson County	.....	.....	.....	.....	31,620	26,460	58,080
Hutchinson County	.....	.....	.....	.....	2,945	4,590	7,535
Miscellaneous pools	155,930	156,716	172,856	166,170	207,545	194,310	1,055,927
Ttl. by mos., 1924	3,226,827	3,252,785	3,566,922	3,735,960	3,939,914	3,745,680	21,568,088
Av. daily prod., 1924	107,317	112,165	115,062	124,532	127,094	124,856	
Ttl. by mos., 1923	4,311,280	3,316,348	4,175,196	3,595,160	3,823,304	3,940,530	23,161,818

The new producing pool is the only one of startling importance that has been found in north or west Texas during the past 12 months dating from July 1, 1923.

Eastland and Stephens Counties, in which is located the deep lime producing pools, did not report a new producer with an initial production sufficient to attract more than ordinary interest and no new important producing territory was found. Extensions to old producing pools were small in acreage extent and the wells small initial producers.

Drilling development continues in a limited way in Shackelford, Callahan, Brown and Palo Pinto Counties. The shallow pools in Shackelford and Callahan are not attracting much attention at this time and are not making the completions that were reported in 1923. Palo Pinto occasionally reports a small oil well completed in the Strawn sand but practically all of its deep producing tests are gassers or small oil producers.

Wichita County

This section of the field made some extensions to its older producing pools during the past six months. Its principal development was centered on the south side of the county in the vicinity of the Little Wichita River and Beaver Creek. This impetus is credited to the completion about the middle of last December of the No. 1 Jackson near Murphy's corner by the Shappell Oil Co. The well flowed 300 bbls. the first 24 hours at 1,814 feet and an intensive drilling campaign followed its completion in that territory. Several wells in that immediate vicinity have been completed, the majority showing from 100 to 250 bbls. daily. At present, drilling development has been curtailed in this and nearby producing pools as the pipe lines serving this territory at the close of this report were refusing to connect up to new producing wells and prorating the runs from a majority of the producing leases. The northern part of the county, in which is located Burkburnett, the Hirschi and the old Sunshine Pools, report a few drilling tests with a minor number of producing completions reported each week, but their initial production is small and the producing territories seem to be fairly well defined. The old Electra district is maintaining a daily production which has extended over several years' time, the producing sands are prolific and of long life, enough new producers are completed to keep up the production level but the gushers of a few years past exist in memory only. New producers in that class are not drilled any more.

Archer County

At the opening of the year Archer County was by far the busiest of any one of the districts comprising the entire field. Its production is averaging around 35,000 bbls. a day at the close of June. Completions for the six months numbered 703 out of a total for the entire field of 1,514. Their initial production was 79,978 bbls. as against a total for the field of 119,255 bbls.. It is reporting around 100 drilling tests or about one-fourth of all the number drilling in North Texas. It is served by a number of the larger pipe line companies' lines and several independent lines that connect its producing pools with the refineries at Electra and Wichita Falls. Development at this time is not as intensive as it was some weeks past, nearly all of the larger producing companies have or are now curtailing their field work. The larger pipe line companies are refusing to connect their lines with new producers and the prorating order is in force in

(Continued on Page 108)

Powell Came Back and Richland Looms Up

When the curtain dropped on the year 1923 it was thought that the last sensational scene in the East Central Texas Field had been presented and that thereafter the petroleum drama would be a tame one to the end, but the actors surprised the audience with a few additional thrills and as the half year closed there was plenty of action on an entirely new part of the stage—the Richland Field had begun to show as a real oil territory.

Last year the Powell Field was the sensation, but it staged its big acts in the last half of the year. The field was opened in January, but was a great disappointment until the latter part of May, when the J. K. Hughes Development Co. drilled in a big well. For the remainder of the year it was one of the busiest spots in America. At the close of the year it was believed to have been completely defined, but a deeper sand, or a pocket of oil near a fault, was drilled into and from this a number of very large initial producers were completed this year.

January passed without unusual events and the only important news from the field in February was the completion of a commercial producer in the Richland district by McDonald and others.

In March the deeper levels in the southwestern end of the Powell Field were penetrated by the drill and gusher wells that shot the production up to 150,000 bbls. on one day resulted. There were not many producers finished in this deeper sand, but there were a large number of dry holes, as a general drilling campaign followed the completion of the good wells. Many of the offsets were dry.

The Powell Field at the close of June was again almost entirely drilled up with little signs of new work starting and all the attention being directed to the Richland district, southeast of Powell. This field is in for a big drilling campaign in the last half of the year.

Boom Collapsed

The most surprising result of developments in the East Central Texas area was the collapse of the leasing and drilling boom in the counties along the so-called Mexia fault northeast of Powell. Millions of dollars were spent for leases in this territory by the Humble, Prairie, Magnolia, Texas, Pure, Humphreys and other interests, but every well drilled deep enough was definitely dry and while a pool may yet be developed in that part of the State much of the confidence has gone out of the oil men who began the year's exploration work with such high hopes.

The amount of field work done in the first six months of the present year compares very favorably with that of the same period last year. There were

(Continued on Page 108)

EAST CENTRAL TEXAS PRODUCTION BY FIELD IN THE FIRST SIX MONTHS OF 1924

Field—	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total Bbls.	No. Oil Wells in June	Av. Dy. Prod. per Well June Bbls.
Powell	2,967,103	3,110,540	3,898,137	3,514,710	3,196,286	2,804,730	19,491,526	771	122.79
*Corsicana	24,800	23,200	24,830	24,000	24,800	24,000	145,600	978	.82
Currie	109,740	100,427	102,331	102,150	113,801	98,790	627,239	68	48.43
Richland	.....	.....	.....	.....	.....	129,330	129,330	27	153.67
Mexia	1,075,948	1,007,340	1,048,079	988,650	948,972	861,540	5,930,562	510	56.31
Total	4,177,591	4,241,540	5,073,377	4,629,510	4,283,859	3,894,390	26,324,257	2,354	55.49
Total first six months 1923	2,010,702	1,780,465	1,996,015	1,833,301	1,928,871	2,209,222	11,758,576		
Difference	2,166,889	2,461,075	3,077,352	2,796,199	2,354,988	1,709,168	14,565,681		

*The old Corsicana Field, opened many years ago, is given an average of 800 bbls. a day through the half year.

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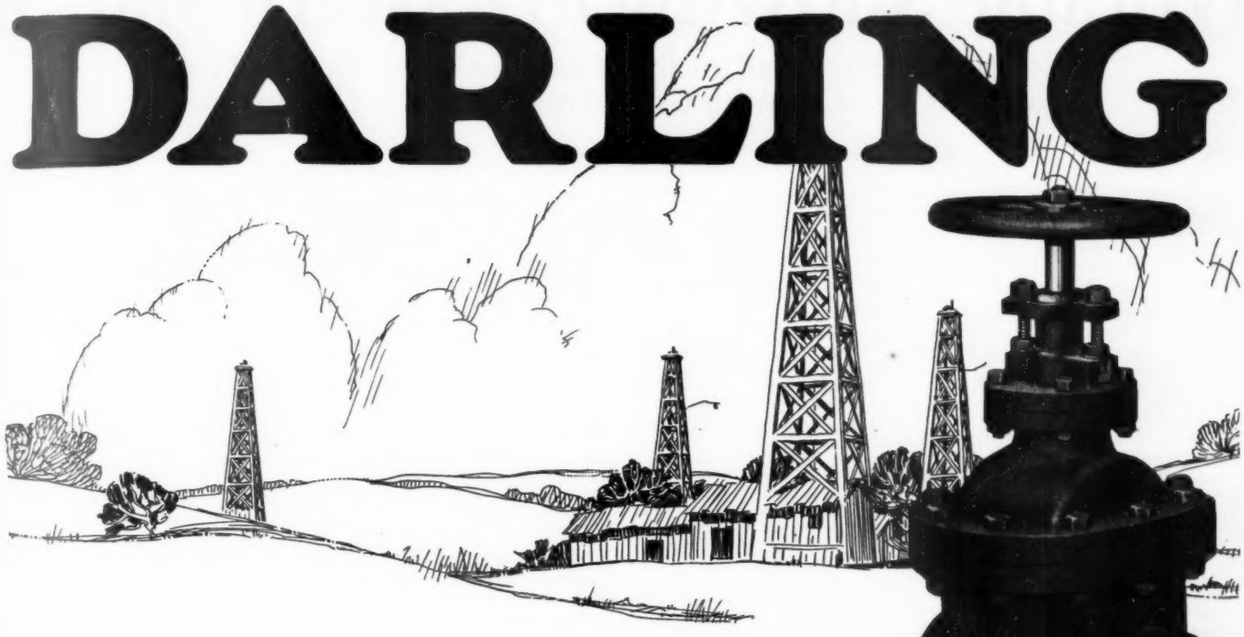

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GATE VALVES

Favorable Showing in Eastern Markets

Conditions First Half of the Year Distinctly Better Than Last Half of 1923 With Good Prospects for a Continuance

By N. O. Fanning

NEW YORK, July 26.—The principal feature of the Eastern refined oil market during the first six months of 1924 was the distinct improvement over the latter part of 1924. The oil business in this section has only to hold these gains to make 1924 a distinctly good year from the viewpoint both of volume of business done and also that of prices obtained.

Gasoline prices showed distinct improvement shortly after the beginning of the year. The tank wagon price of gasoline in New York opened the year at 15½ cents and advanced to 20, at which price it stood at the close of the half-year period. This represents a gain of 4½ cents, or approximately 20 per cent, which seems substantial. Early in the year California gasoline or rather gasoline refined here from California crude, played a big part in supplying the Eastern market. Since January 1 receipts of California crude have been gradually declining. In April and May several of the large buyers of California oil ran low on gasoline refined from Pacific Coast crude, and put in fairly large orders for Mid-Continent gasoline.

The situation as to gasoline however, has become more complicated due to the large production of the product in the Mid-Continent Field. It became fairly evident to Atlantic Seaboard refiners late in May that the overproduction in that quarter might easily result in lower prices, and early in June this was borne out by scattered offerings of Mid-Continent gasoline in the East at 13 cents per gallon, causing reductions in the tank wagon market in certain sections. Because of this, Eastern factors have withdrawn from the Mid-Continent market, believing that before long they will be able to pick up additional quantities at lower prices. A drop of 2 cents per gallon, it is believed, might cause renewed buying of Mid-Continent gasoline by Eastern companies.

Another factor in the Eastern gasoline markets during the last six months has been increased competition among the Standard Oil and large independent companies. An aggressive campaign to capture additional business was inaugurated by the Atlantic Refining Co. in New England, and this was partly responsible, according to men in the marketing trade, for the decline of 2 cents in the tank wagon market in Boston to 18 cents per gallon in the latter days of the half year.

Numerous independent interests have entered the business of marketing gasoline in the Eastern States from service stations. They have apparently had no trouble in buying gasoline, and in many cases have offered it at prices lower than that sold by the big marketers. All this competition has resulted in what is characterized as an unhealthy condition. Service stations have sprung up overnight and it is common in the larger cities to see two or three stations to a block. Many of them, if not the majority, are unsightly. There is no doubt that increased facilities for the motorist were urgently needed, but it is further evident that large, well built and well managed stations could supply this service more conveniently and economically than numerous small, ill-kept stations.

Credit must be given to those who have put in the more attractive service stations, however. Pure Oil Co., The Texas Co. and Standard of New Jersey, "Thrift" Service Stations and a few others have set an example of stations where good service can be obtained. It is believed only a question of time when all the larger marketers will build their own stations, and make them attractive and supply good, clean service.

The lubricating market in the East gave a good account of itself during the first half of 1924. The course of the market for cylinder stocks is an example of the improved trend. Six hundred steam refined advanced from 22½ cents per gallon at refinery to 31½ cents, a gain of 9 cents, or exactly 40 per cent. The demand for this class of oil was enhanced not only by improved motor vehicle consumption but also by the fact that the industrial requirements were much better, especially in the case of certain industries, which had been buying on a hand to mouth basis for more than a year.

Red paraffin oils also showed the first improvement in many months, due to the same causes. Advances in this class of oils averaged about 5 cents per gallon.

The market for lubricants now, however, shows some softness. Reductions from the high levels of the first six months appear probable. In isolated cases there have been reductions of a half cent, but nothing more so far. The declines in the price of Pennsylvania crude are responsible for the turn in the lubricating oil price situation.

Wax is a product which is given more attention in the East than in any other refinery district of the country, due to the fact that the industrial and export demand for it is very large, and that the best grades of crude oil are available. One large refinery makes a specialty of lubricants and wax refined from Pennsylvania crude, and reports that it has sold out its production three to six months ahead at good, prices.

The demand for wax is greater than would ordinarily be imagined, and competition in supplying it is smaller than for gasoline and other major petroleum products. While there are any number of refineries making gasoline, gas oil, kerosene and fuel oil, there are only a comparatively small percentage, taking the total number of refineries in the country, that make wax. It requires not only special equipment, but also the best grades of crude petroleum, which are in limited supply.

Wax is used not only in the making of paraffin wax candles, but it has numerous industrial uses, some of which are responsible for a big gain in the consumption during the first six months of this year. Wax is used in the insulation for electric wiring, and from this it can be seen that the radio fad has stimulated the demand for wax materially. Paper companies are using an increased amount of wax in making waxed paper and allied products.

Fully refined wax of melting points from 120 to 137 ranged in price from 4 ot 5⅜ cents per pound on January 1, 1924, and in June had advanced to a range of from 6¼ to 8½ cents. Late in June a softer tendency was noted in the lower melting points, which fell to from 5 to 7 cents for 120-132 a. m. p., as against a peak of 6½ to 7¼ cents. Wax of 135-137 a. m. p. remains strong at 8½ cents per pound.

Fuel Oil Buoyant

A remarkable advance in the price of fuel oil took place during the first six months of 1924 on the Atlantic Seaboard. Bunker fuel oil sold at $1.35 on January 1, and rose to $1.75. Late in 1923, however, it had sold below $1 per barrel. The advance was attributed to the rise in prices of California fuel oil from 65 cents to $1 per barrel. Eastern refiners were depending largely on the Pacific Coast for this product. The Standard Oil Co. of New Jersey, for instance, was credited with having purchased more topped oil than crude from California companies.

The demand for bunker fuel oil increased materially, and the industrial demand held up well. It is estimated that the demand for bunker fuel oil on the Atlantic Seaboard increased 75,000 to 100,000 bbls. daily over that for 1923. The arrival of summer, however, has naturally brought a slight decrease in the demand, and the price tendency is now soft. One factor, which for a short time had quoted $1.85 per barrel, has dropped to $1.75 and it would not be surprising if all marketers would reduce prices to $1.65 in the near future. These quotations do not include lighterage charge of 6½ cents per barrel.

Gas oil demand improved materially and prices were 1 cent a gallon above those prevailing during the latter part of 1923. One large contract, said to involve more than 100,000,000 gallons, was awarded by the Consolidated Gas Co. of New York to Atlantic Refining Co. at 6½ cents per gallon.

Furnace Oil and Kerosene

Furnace oil was in increased prominence during the early part of 1924, and the demand for the product grew materially. Oil companies are not saying much about their sales of furnace oil, but the writer knows that the number of office buildings and apartments, to say nothing of private residences, that have converted from coal to furnace oil during the last six months has been beyond all expectations, not only in New York City but in other large Eastern metropolises.

The larger oil companies are perfecting oil burners and plan to make the most aggressive campaign in the history of the oil business next winter. It will begin early in the fall, however.

Kerosene itself was featureless, and prices showed little change during the first six months of 1924.

General Outlook

The situation as to the prospects for the last half of 1924 hinges largely on crude petroleum. Efforts to curtail production of the raw material have met so far with only partial success, and heroic efforts may yet have to be made before a substantial decline is effected.

As to the demand, however, there is every belief that the last six months of 1924 will show new increases, especially in the demand for gasoline, furnace oil and lubricants.

89,953,000 BARRELS OF PETROLEUM RECEIVED AT EASTERN PORTS

By N. O. Fanning.

NEW YORK, July 28.—Figures based on capacity of incoming oil-laden tankers indicate that during the first six months of 1924 approximately 89,953,000 bbls. of crude and refined petroleum were shipped to Atlantic Seaboard ports from ports on the Gulf and Pacific Coasts of the United States and from Mexico, Trinidad and Peru. This is a daily average of 494,000 bbls.

Adding to the 89,953,000 bbls. brought in by tanker, the oil coming by pipe line and tank car, estimated at 30,000,000 bbls., the consumptive capacity of the Atlantic Seaboard territory east of the Allegheny Mountains and from Florida to Maine can be estimated at about 119,953,000 bbls. for the sixth months' period. This includes oil exported from Atlantic ports.

Where does the oil brought in to Atlantic Coast ports by tank steamer come from? This question can be answered by the names of the ports at which the tankers take on their cargoes. Figures compiled by The Oil and Gas Journal from capacity of the incoming laden tankers show that the 89,953,000 bbls. brought in during the first six months of 1924 were from the following port areas, (figures in barrels):

	Total	Daily
Baton Rouge and New Orleans	6,402,000	35,000
Port Arthur, Sabine and Beaumont	22,216,000	122,000
Texas City, Houston, Galveston, etc.	12,900,000	71,000
Pacific Coast	26,419,000	145,000
Mexico	20,730,000	114,000
Peru and Trinidad	1,286,000	7,000
Total	89,953,000	494,000

These figures indicate that 41,518,000 bbls., or about 46 per cent of the oil receipts at Atlantic ports, came from Gulf Coast ports; 26,410,000, or 30 per cent, from California; 20,730,000 bbls., or 23 per cent, from Mexico, and 1,286,000 bbls., or 1 per cent, from Trinidad and Peru, combined.

Situation Changin,

Although receipts from Gulf ports for the sixth months constituted about 46 per cent of the total receipts, the June figures show that the receipts from the Gulf are now much greater compared with the total, while those from the Pacific Coast are smaller.

Of the 17,336,000 bbls. of crude and refined oil arriving at Atlantic ports by tanker in June, 1924, 9,194,000 bbls., or 53 per cent, came from Gulf Coast ports. The following table shows the source of oil receipts in June, and for the first six months of 1924, in percentages:

	June	6 Mos.
Gulf Coast	53%	46%
Pacific Coast	23%	30%
Mexico	22%	23%
Other imports	2%	1%

Oil men are familiar with the conditions which have resulted in larger shipments of Gulf Coast oil, and smaller shipments of California oil, to the Atlantic Seaboard. As will be noted, imports have remained about unchanged, a slight decrease in percentage received from Mexico being offset by a similar gain in receipts from Trinidad and Peru. During the next six months a further gain in receipts from the Gulf Coast and further decline in receipts from California are expected.

The change which has taken place during the last six months in source of oil receipts at Atlantic ports is shown by the following table, giving monthly receipts from principal ports (in barrels):

	Baton Rouge and New Orleans	Pt. Arthur Sabine & Beaumont	Texas City Houston Galveston Etc.
June	2,065,000	4,037,000	3,092,000
May	1,481,000	3,879,000	3,170,000
April	1,236,000	4,229,000	2,413,000
March	533,000	3,425,000	2,313,000
February	533,000	3,307,000	1,226,000
January	554,000	3,339,000	686,000
Total	6,402,000	22,216,000	12,900,000

	Pacific Coast	Mexico	Trinidad & Peru
June	3,963,000	3,850,000	329,000
May	3,829,000	3,992,000	436,000
April	4,323,000	3,498,000	231,000
March	4,255,000	3,769,000	290,000
February	5,111,000	3,153,000	.....
January	4,938,000	2,468,000	.....
Total	26,419,000	20,730,000	1,286,000

A study of the above tables shows that the biggest gain has been in shipments from Texas City and New Orleans areas. A further gain is expected in shipments

(Continued on Page 157.)

POWER OF ONE Kind or another is required to drill or pump wells. The resistance to this power, or in other words the load, varies from day to day and hour to hour, and the variations in the load are, more often than not, very abrupt.

When steam engines are used for motor power, shocks are partly absorbed by the resilient, cushion-like nature of the live steam in the cylinders. When gas or oil engines are used, the shock of variations in the load is augmented rather than absorbed.

One of the several pronounced advantages of "Camel Hair" Belting is its elasticity—its capacity for absorbing shocks and strains. Other types of oil field belts lack this quality because they are made largely of cotton.

Illustrate the difference for yourself. Pull a strand of cotton yarn through your fingers and feel how firm it is. Then stretch a strand of hair and feel its life and elasticity.

Under sudden load, or a sudden increase in the load, the tendency of "Camel Hair" Belting is to stretch on the tight side of the pulleys, and this stretch is automatically recovered as it drops the load on the slack side. The saving to machinery in the constant strains and shocks thus absorbed is tremendous in the course of time.

"Camel Hair" Belting for any oil country purpose may be had at any Frick-Reid Store.

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Important Discoveries in Rockies

Craig Field in Colorado Is One of Great Promise. Deeper Sand on Teapot Dome. Decline of Salt Creek a Surprise

By F. B. Taylor

The production of the Rocky Mountain fields in the first half of 1924 amounted to 24,532,523 bbls., according to the best revised figures gathered from pipe line sources. This was a gain over the first six months of last year of 4,203,277 bbls. the production in that period having been 20,329,246 bbls. It was less by 1,625,635 bbls. than the production for the last half of 1923, which totaled 26,158,158 bbls. The Wyoming-Montana fields reached their high tide of production in the month of November, 1923, when the output showed a total of 4,792,466 bbls., or 159,782 bbls. a day. Since January the production has steadily fallen off. Salt Creek fell off from 3,656,090 bbls. in January to 2,730,287 bbls. in June, and is confidently thought to have shot its bolt. There was a time when it was believed that Salt Creek would rival Cushing in Oklahoma, if permitted to yield to its utmost, but no one but a confirmed optimist believes that any more.

The six months' review is characterized by a lack of new fields and by the absence of extensions to the known pools. More wells were completed in the first half of 1924 than in any previous period of six months, but these wells were mainly drilled inside the known development areas and there were fewer wildcats put down than any time since 1918.

The most important discovery in the early part of the year in Wyoming was the third Wall Creek sand in Teapot by the Mammoth Oil Co. While this sand had been drilled to in the Salt Creek Field, it was only tested by two wells and its existence in Teapot was not confirmed until the Mammoth Oil Co. found it about 200 feet below the second Wall Creek sand at a depth of 3,116 feet. It is expected to develop as a producing horizon over much of the southern part of Salt Creek and all of Teapot Dome.

In January, The Texas Co. and the Transcontinental Oil Co. drilled into the Dakota sand in the Moffat Field in Moffat County, Colorado, and found a gusher that started off at 4,000 bbls. This was the opening well of the Moffat Field and a dozen wells are now drilling in that district, though none has yet reached the sand.

In January, the Utah Oil & Refining Co. drilled into the Tensleep sand on the Black Mountain Dome in Hot Springs County, Wyoming, and found an initial production of 300 bbls. This opened a new black oil field in the Big Horn Basin of Wyoming. The second well is drilling at present.

The White Eagle Refining Co. started fires under the first battery of stills of the new plant of the firm at Casper, in the latter part of January. The plant is located about 5 miles east of Casper and a short distance east of The Texas Co.'s refinery.

In February, the Buck Creek Oil Co. startled the operators with a 300-bbl. producer in the Lance Creek Field after that operation had been practically condemned by the majority of the oil firms, and later on the Ohio Oil Co. drilled in two good wells that started off at over 1,000 bbls.

The Baxter Basin Field, in Sweetwater County, Wyoming, shows for a gas field but the operators have given up hope of finding oil there and are about ready to quit. The Producers & Refiners Corp. is preparing to lay a gas line to supply the city of Rock Springs with gas.

The Mule Creek Field started producing in March after more than a year's shut down. Most of this oil is going to the Imperial refinery in Canada and the enlargement of this refinery allows greater production from the Sunburst Field in Montana which has been partly shut in on account of the lack of buyers.

The Prairie Oil & Gas Co. has merged the Producers & Refiners Corp., the Kasoming Oil Co., and the Bair Oil Co. and has taken over these firms and their holdings in the Wyoming oil fields. The Producers & Refiners own a large refinery at Parco, near Rawlins, Wyo., and has production in nearly every field in the State, besides trunk pipe lines connecting with the central Wyoming Fields for both oil and gas. The Kasoming Oil Co. has production in the Lost Soldier and at Salt Creek and the Bair Oil Co. has production in the Lost Soldier.

The Teapot Dome case between the Government and the Sinclair interests was started at Cheyenne, in the Federal Court there and the court appointed Albert Watts and Admiral Strauss as receivers for the Teapot Dome, the trial to be held in the fall.

The Utah Oil & Refining Co. took over the Newlon & Lackey leases in the Big Piney Field in southwestern Wyoming and the Midwest Refining Co., of which the Utah is a subsidiary, will drill a deep test. This field has shown commercial wells of small size and shallow depth and the Midwest will attempt to find deep production in large quantity.

In April, central Wyoming experienced one of the worst floods in its history, the fields were cut off completely and roads made impassable, bridges were destroyed and the railroads lost very heavily. The oil field work was at a standstill for the greater part of the month.

The Hatfield Oil Co. found a gas well on the Eight Mile Lake Dome in Carbon County, Wyoming, and later made a contract with the Producers & Refiners Corp. for the production of the well to be used in the Parco refinery for fuel.

The California Oil Co. drilled in a producer in a new deep sand on the west end of the Cat Creek Field in Montana, which is named the third Kootenai sand. Subsequent development shows the area to be rather spotted.

Operators in the Salt Creek Field started many wells and an intensive drilling campaign was in prospect for the summer which would have been well along by May but for the bad weather and late spring. The black oil production of the Rocky Mountain region is being looked into. So far, this crude has been a drug on the market.

The Midwest Refining Co. brought in a wildcat well in the Lake Basin Field about 35 miles northwest of Billings, Mont. and opened a new development. The sand is about 3,800 feet and development is expected to be slow due to the depth. The oil is a high grade crude.

In the Sunburst Field in Toole County, Montana, the Van Meer Oil Co. brought in a producer good for 3,000 bbls. in an area condemned by dry holes. The extension led to wildcatting in all directions in that field.

The Midwest prepared to lay a pipe line from its wells on the Hogback structure in northern New Mexico to a rail point to carry its production to market. The oil will be sent by rail to the refineries for treatment.

Average Production per Well

The following tabulation shows the number of oil and gas wells in the writer's territory in Montana, Wyoming, Utah and New Mexico, together with the daily average production in June of the more important fields. The other fields are carried "miscellaneous" in the report:

Field—	Oil Wells	Gas Wells	Aver. Daily Prod. Bbls.	Av.Dy. Prod. per Well Bbls.
Sunburst, Mont..	126	3	4,446	11.48
Cat Creek, Mont.	89	0	4 584	50.31
Big Muddy	230	0	3,887	16.90
Elk Basin	137	2	1,273	9.22
Ferris	13	6	149	11.46
Grass Creek	334	1	3,463	10.24
Greybull-				
Torchlight	30	1	58	1.93
Hamilton Dome..	20	0	724	36.20
Lance Creek	29	3	2,219	76.53
Lost Soldier	46	0	5,365	116.63
Mule Creek	45	0	840	18.67
Osage	70	0	475	6.79
Pilot Butte	19	0	67	3.53
Poison Spider	12	10	913	76.08
Rock Creek	50	0	3,225	64.50
Salt Creek	1,075	0	91,009	84.65
Teapot	60	12	3,014	50.23
Miscellaneous	193	79	937	4.85
Total	2,578	117	126,621	49.13

The miscellaneous pools noted above are given below, together with the number of oil and gas wells in each.

Montana Field—	No. of Wells Oil	Gas
Lake Basin	1	0
Wyoming—		
Baxter Basin	0	5
Buffalo Basin	0	1
Sand Draw	0	4
Billy Creek	0	8
Black Mountain	1	0
Bolton Creek	12	0
Boone Dome	0	0
Byron	9	0
Circle Ridge	1	0
Dallas	31	0
Derby	10	0
Big Piney	3	0
Eight Mile Lake	0	2
Enos Creek	0	1
Golden Eagle	0	2
Hidden Dome	0	5
Hudson	33	0
Iron Creek	1	3
Kirby Creek	3	8
Lamb Dome	0	2

Field—	No. of wells Oil	Gas
Little Buffalo Basin	0	7
Mahoney	0	9
Maverick Springs	24	0
Medicine Bow	1	0
Notches	1	0
Oregon Basin	0	1
Rex Lake	1	0
Simpson Ridge	1	0
South Casper Creek	7	15
Spring Valley	19	0
Warm Springs	35	0
Wertz	0	2
Colorado—		
Wellington	1	1
Moffat	1	0
New Mexico—		
Hogback	6	0
Table Mesa	0	1

PRODUCTION OF ROCKY MOUNTAIN FIELDS FIRST SIX MONTHS 1924

Fields—	January	February	March	April	May	June	Ttl. 6 Mo.
Salt Creek	3,656,090	3,225,445	3,098,195	2,867,560	2,876,175	2,730,287	18,454,052
Teapot	128,550	115,820	111 940	101,175	90,530	90.415	638.430
Big Muddy	110,445	107,715	118,566	101,690	121,770	116,618	676,603
Grass Creek	96,555	90,955	95,445	107,050	116,686	103,075	609,765
Elk Basin	41,305	41,500	43.505	41.675	41,465	38 203	247,653
Greybull	4,065	4,885	3,975	2.755	2,235	1.739	19.654
Mule Creek	...	...	...	21.285	34.786	25.208	81,278
Rock River	99,750	109.740	108.880	113.600	109.905	96.741	638.616
Lance Creek	62,330	56,090	59.605	60.585	60.924	66 580	366,114
Poison Spider	9,150	8.330	7.330	7.445	13.730	27,380	73,365
Osage	20,550	18.195	18.815	18.420	18,580	14.260	108,820
Hamilton Dome	15.660	16,025	16,970	19.410	20,400	21,731	109,195
Lander	12,515	11 795	11.925	15.295	6.235	11.340	69.105
Pilot Butte	2.610	2,390	2.620	2.630	2.460	1.995	14.705
Lost Soldier	195,025	184.510	114.700	133.645	174,140	160.942	962.962
Ferris	4.005	3.945	4.615	4.430	4.755	4.465	26.215
Cat Creek	142,395	136,335	138.685	138.910	166.325	137,533	860.183
Sunburst	13.425	14.670	14.085	124.150	154 950	133.385	454.665
Miscellaneous	21,805	21,105	24.235	19.745	17,515	16,737	121,142
Totals	4,636.230	4,168.450	3,993.890	3,901.755	4,033.564	3,798.634	24,532.523
Totals 1923	3,208.412	2.970.760	3.358.011	3,670,984	3,650.903	3,470.176	20.329.246
Difference	1,427.818	1,197,690	635,879	230,771	382,661	328,458	4.203.277

WESTERN KENTUCKY SLOWED UP THE FIRST HALF OF THIS YEAR

By Vern T. Whitney

The Western Kentucky Field for the first half of 1924 showed 479 completions with an initial production of 8,560 bbls. There were 138 dry holes and 7 gas wells. Compared with the same period of 1923, these figures show a decrease of 259 in completions, 59 fewer dry holes and 2 more gas wells. A drop of 3,186 bbls. is noted in new production.

Allen County led in the number of new completions, with a total of 121, 75 of which were producers, with a flush of 2,061 bbls., and the Cumberland-Monroe district led in the amount of flush production with 3,120 bbls. from 29 producers.

The above figures show that the first six month period of 1924 has been quite inactive in all sections of the field with the exception of Barren and Cumberland-Munroe Counties, and Hancock and Ohio Counties, better known as the Owensboro district, where development work has gone on quite rapidly.

The important features of the past six months of 1924 in western Kentucky included the opening up of the Emery-Moore Pool, 2 miles west of Glasgow, in Barren County; the finding of a new productive sand below the Pencil Cave in the Kettle Creek district of Cumberland and Monroe Counties; the opening of the Kerley Pool in southwestern Allen County, and the extension of the Mc Lemore-Gillespie-Price Pool in southwestern Warren County.

Price Changes

The advances in the price of crude throughout the field, the first two months of 1924, served to stimulate drilling activities to a large extent and extensive drilling programs were laid out by a number of companies and individual operators. Then, too, the Indian Refining Co., on the first of the year, cancelled, through mutual agreement, all old contracts carrying the 32-cent deduction from the posted price. This concern then posted its own prices classed as Western Kentucky Light and Western Kentucky Heavy, the former applying to oil testing 32 gravity and above, and the latter to oil testing less than 32 gravity. The Paragon Development Co. continued paying the Somerset prices for this crude. On May 27, both the Indiana Refining Co. and the Paragon Development Co. discontinued their former classifications and instituted a new scale of prices based

(Continued on Page 100)

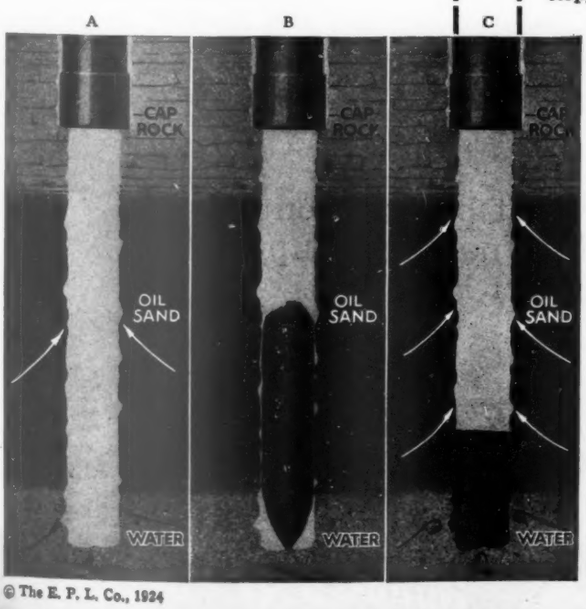
WYOMING

Summary of Completed Work by Districts First Six Months in 1924.

District—	Comp.	Prod	Dry	Gas
Big Muddy	1	172	0	0
Salt Creek	196	44,268	3	0
Lance Creek	5	4,415	1	0
Warm Springs, Grass Creek, etc	7	1,700	1	0
Big Horn Basin	1	30	0	0
Lost Soldier and Carbon	12	6,100	4	1
Rock River District	3	345	0	0
Fremont County	2	....	1	1
Lincoln and Uintah Counties	1	20	0	0
Baxter Basin	1	....	1	0
Osage	4	110	0	0
Natrona County	4	300	2	0
Miscellaneous	1	....	0	1
Total 6 mo., 1924	238	57,460	13	5

(Continued on Page 104)

Damming the Flow of Water by Plugging Oil Wells with EAGLE LEAD WOOL



HUNDREDS of oil wells were reclaimed for profitable production during the past year by plugging them with Eagle Lead Wool. In every case, Eagle Lead Wool either shut off the flow of water entirely or else greatly reduced it. By its use operating companies have avoided the heavy burden of lifting water and also the expensive process of taking out the water, emulsified with the oil. Eagle Lead Wool has enabled them to get more barrels of oil out of their wells and get that oil free from water. Eagle Lead Wool stops the flow of water at its source and keeps it stopped.

Lead Wool for plugging oil wells is a proven thing. While its use has only become general during the past year, the results obtained have shown not only its efficiency, but also its dollar and cents value in reclaiming production. Wells that were considered as played out, and wells that were considered a total loss, have from a producing standpoint, been profitably reclaimed.

In the drawings at the left [A] represents an unplugged well, in which the water could mix freely with the oil. [B] shows the cartridge container in place, ready for tamping. [C] the well when completely plugged, the water completely stopped.

The method of plugging oil wells with Lead Wool is an Eagle-Picher development worked out by Eagle-Picher men on oil operations in the Mid-Continent field. The material is inserted in cartridge-like containers dropped into the well and then tamped. It forms a perfect seal, as the Lead Wool is forced into every irregularity of the wall and under pressure consolidates to make a plug of practically solid lead, shutting off every water course at its source. Eagle Lead Wool is pure double refined lead. It is permanent and non-corrosive. The process is described in detail in Lead Wool for Plugging Oil Wells.

Eagle Lead Wool is stocked by most of the leading oil field supply companies in the Mid-Continent Field. Ask for it.

Send for your copy of "Lead Wool for Plugging Oil Wells," or write us for detailed suggestions on oil wells in which you are troubled with water.

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2 New Pools in Louisiana-Arkansas

More Wells Completed in the First Half of Year Than in Similar Period Last Year But Initial Production Was Less

By M. L. Vaughn

While results of the first six months' development in the North Louisiana and South Arkansas Fields failed to produce anything sensational and were in marked contrast to the same period in the previous year, steady progress has been made in exploration and at least two new pools and a number of important extensions have been effected as a result of drilling operations.

The Nevada County Pool, in Arkansas, had loomed on the horizon early in 1923, but the heavy quality of the oil, lack of storage or marketing facilities and distance from a base of supplies had combined to discourage drilling in that territory and it was not until early in 1924 that Nevada County was put on the map as a producing pool with a production which has steadily increased from 1,000 to 3,000 barrels a day.

The completion of the Mansfield Hardwood Lumber Co. Railroad, a 25-mile road of standard construction, extending from Reeder, in the Missouri-Pacific Railway, to the field, will aid materially in the development of this district, the first trainload of oil having been shipped out of there during the past few days, consigned to the Red River Refinery at Shreveport. The oil is only 14 degrees Baume, but is high in gasoline content. There are at present 18 producing wells in the Nevada Pool.

Cotton Valley Caused Excitement

The greatest excitement of the year, up to date, has been the discovery of oil near Cotton Valley, in Webster Parish, Louisiana. The first well in this territory was a wildcat test drilled by Doctor Webb on the Merritt lease in Section 13-21-10, completed on August 25, 1922, a 30,000,000-foot gasser at 2,558 feet.

It was not until the following November that the Oil Fields Gas Co. completed a well on the Merritt lease in Section 14-21-19, which came in making 25,000,000 feet of gas and later blew itself into oil and was taken over by the Louisiana Oil Refining Corp. in accordance with terms of the drilling contract. Subsequent development in the Cotton Valley district up to about the middle of May, were repetitions of this experience, the wells coming in as gassers with a mist or spray of oil, and later blowing into oil wells.

On May 20, the Ohio Oil Co. brought in the first real oil well in the Cotton Valley district. This was No. 2 Hodges on the Bodcau Lumber Co. land in Section 15-21-10, which flowed for six hours at the rate of 11,000 bbls. a day. The well was then closed in to put choker in the line and when reopened it refused to flow. It was finally bailed back and has been flowing at intervals at the rate of 1,500 bbls. a day, 50 per cent salt water. Following this completion, during the months of May and June, the Gulf Refining Co. completed No. 1 A. J. Hodges, Section 11-21-10, which flowed for one day at the rate of 8,000 bbls. a day, then ceased flowing and is now swabbing 1,000 bbls. and the Invincible Oil Co. completed No. 1 A. J. Hodges, Section 11-21-10, swabbing 1,000 bbls. of fluid, only 100 bbls. of which is oil.

Much of the difficulty experienced in this territory, with the wells sanding up and going into salt water, is attributed to the enormous gas pressure, and as this pressure diminishes it is confidently expected that improved conditions will follow. Under present conditions, all the oil has been treated and only a very small proportion of the production of the field has been taken by the pipe line companies. Wells in the Cotton Valley district are completed at from 2,500 to 2,580 feet and the oil tests 29 gravity.

These sand and salt water conditions have tended somewhat to discourage development in the Cotton Valley district, but as the gas pressure diminishes, there is a steady improvement in conditions and since the close of the month of June, there have been several wells brought in flowing from 1,000 to 3,000 bbls. a day of comparatively clean oil and the territory now looms as one of the big sensations of the year. At present there are 17 producers in the new district with a daily average production estimated at 6,000 bbls.

Smackover Production Increase

Although lacking in development of a sensational character, as compared with conditions in 1923, development in the Smackover district in Union and Ouachita Counties, Arkansas during the first six months of the current year, resulted in materially increased production from this territory, the total runs for this period equaling two-thirds the entire production for 1923. Probably the peak of production for the Smackover district was reached during the months of May and June, 1924, since at the close of the month both drilling activity and production were showing a steady decline.

A most unexpected and important feature of the development in the Smackover Pool during the past six months, was the extension of the Norphlet territory westward, opening up one of the most prolific pools yet discovered in the State of Arkansas. The first well in this territory was completed by the Unity Oil Co., on the Alphin lease, in Section 24-16-16, with an initial production of 3,500 bbls. During the ensuing months, dozens of good producers were obtained in this territory and the pool extended until it almost connects with the Louann and Smackover Pools on the north and the Norphlet Pool on the east, covering a territory of fully four square miles.

So rapidly did the production increase during the past few months that pipe line facilities were inadequate to handle it and millions of barrels of crude oil were held in steel and earthen storage. In order to relieve the situation, a 14-cent rate was granted by the Interstate Commerce Commission and since this was put into effect there has been an average of from 50,000 to 120,000 bbls. a day shipped out of the Smackover territory by rail. All new production is now being accepted by the pipe line companies and the field storage of the big producers is being rapidly diminished.

Pipe line runs in the Smackover district during the first six months of 1924 amounted to 21,191,570 bbls., an increase of 6,403,153 bbls. over that of a like period in 1923. At the close of June there were 1,938 producing wells in this district with a daily production of 133,535 bbls.

826 Wells Completed

The completion of 826 wells during the first six months of the current year represented an increase of 40 over a like period of 1923, while a decrease of 63 in the number of dry holes and of 86 in the number of gas wells, thereby increasing the proportion of producing oil wells was offset, in effect by the fact that the amount of initial production was only 172,043 bbls., while for the corresponding period in 1923 the initial production amounted to 566,862 bbls.

Caddo again showed the remarkable staying qualities of its wells by the fact that although comparatively little new work was done in this territory, the new production amounting to only 3,177 bbls., the total production for the six months ending June 30, amounted to 2,000,634 bbls., while for the same period in 1923 it was 2,095,843 bbls., a decrease of only 95,208 bbls.

The Haynesville Pool in Claiborne Parish, showed the biggest decline of any district in the entire field, the production falling from 6,030,042 bbls. for the first six months in 1923, to 3,100,811 bbls. for a like period in 1924, a decrease of nearly 50 per cent.

The Homer Field held up remarkably well, considering that there has been very little development in this territory, the production falling from 1,915,059 bbls. in 1923 to 1,437,246 bbls. in 1924, the De Soto, Red River and Bellevue districts showing a more pronounced decline in production.

Notwithstanding the steadily increasing production during the first six months of the current year, credit balance quotations failed to show any reaction but on the contrary were steadily advanced during the first three months of the year, remaining stationary until June 10, when a cut of 15 cents was made in the Smackover district.

A Production Increase

Total production from the combined fields in North Louisiana and South Arkansas for the first six months of the current year amounted to 32,897,683 bbls., as compared with 30,855,298 bbls. for the corresponding period in 1923, an increase of 2,042,385 bbls. Production in South Arkansas increased from 18,524,471 bbls. in 1923 to 24,355,910 bbls. in 1924, an increase of 5,831,439 bbls. North Louisiana showed a decrease of 3,789,044, the production for the first six months of 1923 being 12,330,827 bbls., while that for the corresponding period of 1924 was only 8,541,773 bbls.

N. LOUISIANA AND S. ARKANSAS
Summary of Field Operations First Six Months of 1924

District—	Oil	Dry	Gas	Total	Initial Prod.
Bellevue	60	6	0	66	1,742
Caddo	12	6	0	19	3,177
Claiborne	2	4	0	6	71
Cotton Valley	5	2	0	7	14,475
De Soto	0	1	0	1	0
Red River	0	2	0	2	0
Louisiana wildcats	1	34	70	105	500
Union Co., Ark.	365	25	23	413	113,732
Ouachita Co., Ark.	344	22	10	376	31,270
Stephens	28	0	3	31	697
Nevada County	7	5	0	12	705
Arkansas wildcats	2	25	0	27	135
Ending June 30, 1924	827	132	103	1,062	172,543
Ending June 30, 1923	786	161	119	1,066	566,862
Difference	41	29	16	4	394,319

NEW MEXICO LEASE REPORTED

OKLAHOMA CITY, Okla., July 26.—Operating as the Arkansas Fuel Oil Co. the Benedum & Trees interests of Pittsburgh, Pa., have leased 30,000 acres of land in Chaves County, N. M., and are preparing to drill one or more tests for oil. The land is on what is known as the Manning Dome about 60 miles from Roswell. The company secured leases after its geologists had made an examination of a large area of southeastern New Mexico. Geologists expect Megdalena sands of the Pennsylvania formation in that area.

PENN-MEX GETS 1,000-BBL. WELL

PITTSBURGH, Pa., July 26.—In the Cacalilao Field, in Mexico, the Penn-Mex Fuel Co. completed its No. 6 Paciencia and good for 1,000 bbls. a day. This well and lease is owned jointly by the Penn-Mex Fuel Co. and the Transcontinental Oil Co. No. 6 is the second well completed on this property and gives the impression of a pool of some dimensions. The Penn-Mex Co. and its associates are drilling four wells in that section and the Penn-Mex Co. is drilling three wells on the Alamo tract.

VEGETABLE OIL FUELS?

The French Journal Officiel publishes particulars of proposed public trials of lorries and tractors propelled by vegetable oils or by-gases made by an attachment to the vehicles. The trials will be in collaboration with the French War Department and will take place in either September of October next, in a district near Paris, and are expected to last for eight days. The tests will be limited to such machines or motors as have already been in the tests of 1923 and 1924 organized by the Central Committee of Mechanical Culture or by the Minister of War.

SUMMARY OF PRODUCTION OF ARKANSAS FIRST SIX MONTHS OF 1924

Field—	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total Bbls.	No. Oil Wells June 30	Av. Dy. Prod. per Well June Bbls.
El Dorado	501,520	419,525	420,755	384,010	404,525	383,515	2,513,850	1,005	12.72
Smackover	3,158,360	2,784,120	3,278,610	3,566,845	4,136,367	4,267,268	21,191,570	1,938	73.39
Nevada County	.....	28,000	52,710	47,350	40,480	38,095	206,635	18	70.56
Stephens	26,800	71,105	120,620	70,020	77,745	67,565	443,855	221	10.19
Total	3,686,680	3,302,750	3,882,695	4,068,225	4,659,117	4,756,443	24,355,910	3,182	44.70
Total first 6 months 1923	3,222,605	2,740,024	2,978,802	2,873,830	3,219,319	3,463,227	18,497,807		
Difference	464,075	562,726	903,893	1,194,395	1,439,798	1,293,216	5,858,103		

PRODUCTION OF THE NORTH LOUISIANA FIELDS IN FIRST SIX MONTHS OF 1924

Field—	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total Bbls.	No. Oil Wells in June	Av. Dy. Prod. per Well June Bbls.
Bellevue	176,029	150,150	165,560	168,971	160,355	162,945	984,010	257	21.13
Caddo	294,383	286,625	301,119	357,887	342,695	417,925	2,000,634	1,341	10.39
De Soto, Red River and Sabine	111,516	105,530	111,701	107,213	133,170	130,155	699,615	444	9.77
Elm Grove	24,717	20,359	25,507	26,224	27,190	26,630	150,627	37	24.00
Haynesville	549,989	505,712	535,468	386,652	472,100	550,890	3,100,811	700	26.23
Homer	240,859	238,050	244,180	236,332	241,220	236,605	1,437,246	558	14.12
Cotton Valley and Sarepta	577	7,816	15,039	27,863	26,105	92,430	168,830	17	181.23
Total	1,398,370	1,314,242	1,498,574	1,311,142	1,401,835	1,617,610	8,541,773	3,354	16.07
Total first six months 1923	2,272,641	1,911,560	2,024,319	2,136,590	2,125,298	1,986,283	12,456,691		
Difference	874,271	597,318	526,745	825,448	723,463	358,673	3,914,918		

Pipe Line Extensions in Six Months

Completion of Sinclair Teapot Line and Oklahoma-Standard System in Southern Oklahoma and Louisiana Largest Undertakings

Two major pipe lines were completed during the first six months of 1924, many smaller lines were finished and a large number of gathering lines and extensions were completed to take care of the oil in the new fields developed recently bringing the pipe line work in the United States up to the high level of accomplishment which has been maintained for the past few years.

The most notable achievement was the completion of the 720-mile pipe line of the Sinclair Pipe Line Co. from Teapot Dome, in Wyoming, to Freeman, Mo., a station just south of Kansas City, where this line connects with the main Sinclair lines joining Houston with Chicago. This line utilizes 10-inch pipe in the high-pressure areas and 12-inch pipe at low-pressure points. In three places 8-inch line is used for short distances. The line was finished about June 1, together with its 17 pump stations and has been standing full of oil since then.

Second Largest System

The second largest system to be completed was the Oklahoma Pipe Line Co. Standard Pipe Line Co. line from the Hewitt Field in southern Oklahoma to Moore station, near Shreveport, La. The 168.8 miles of 8-inch and 10-inch pipe line from the Hewitt Field in DeQueen, Ark., was put into operation by the Oklahoma Pipe Line Co., a subsidiary of the Standard Oil Co. (New Jersey) in April. DeQueen is just over the line in Arkansas and the 160 miles of line laid in Oklahoma is the largest single project started or completed in the State during the first half of the present year. The line includes 150.5 miles of 8-inch pipe and 18.5 miles of 10-inch pipe. Five pump stations force the oil through the line. This company also finished a 12-mile line of 4-inch pipe from the Hewitt station to the Graham Field.

At DeQueen, Ark., the Oklahoma Pipe Line Co. connects with the line of the Standard Pipe Line Co., a subsidiary of the Standard Oil Co. (Louisiana), which delivers the oil at the Baton Rouge, La. terminus. This company recently finished a connecting line between DeQueen, Ark., and Moore Station, La., near Shreveport, La., bridging the gap of 200 miles between the two places. The new line includes 19 miles of 12-inch and 181 miles of 8-inch.

Cromwell Pool Lines

The Cromwell Pool, in Township 10-8, Seminole County, Oklahoma, was the scene of the greatest amount of pipe line activity during the early months of 1924. Practically every crude oil purchaser ran lines to this new major pool, which promises to become an important factor in crude production. Early in the year the Oklahoma Pipe Line Co. extended its 4-inch pipe line 12 miles from its Wetumka station to Wewoka. Four miles of 4-inch pipe from this line branched off to the Cromwell Pool. The Magnolia Petroleum Co ran 45 miles of 5-inch line to Wewoka from its station on its main line south of Shawnee. From Wewoka it laid 13 miles of line to Cromwell, part of which was 4-inch and part 6-inch.

The Prairie Pipe Line Co. finished its 8-inch line from its Beggs station to the Cromwell area early in June. This was a 30-mile extension. Its 15-mile extension of 6-inch line into this field from the south end of the Okemah line, which also taps the new stuff in Township 9-9, was finished in March. The Cosden Pipe Line Co. completed 20 miles of 6-inch line from its Henryetta station to this new region and the Sinclair Pipe Line Co. put in 10-miles of line from the Okemah station, partly 4-inch and partly 3-inch, looped part way. The Shaffer Oil & Refining Co. has about finished a 32-mile extension of 4-inch from its Salt Creek Station in Section 14-8. The Ozark Pipe Line Co. (Roxana) extended its Stroud line 30 miles, finishing the work about June 30. This line is 6-inch, with a 4-inch loop part way. The Gulf Pipe Line Co. finished two 4-inch lines into the Cromwell area in addition to the other extensions enumerated. One of these lines was extended 23 miles from its Deaner station and the other was extended 10 miles from its Okemah station.

Extensions to Stroud

The Stroud development caused a number of pipe line extensions also. The Sinclair Pipe Line Co. ran a 4-inch line from its main trunk line connection south of Stroud through the Stroud producing area to the development in Section 2-13-6. The Prairie Pipe Line Co. ran seven miles of 4-inch line from a connection with its main trunk line near Davenport and made an extension of four miles of 2-inch from the old 3-inch terminal in Section 3-14-7. The Ozark Pipe Line Co. finished 20 miles of 6-inch line from its Cushing station to Stroud. The Magnolia Petroleum Co. completed six miles of 4-inch from its main line at Davenport to the field and the Lubrite Refining Co. laid four miles of 2-inch line from the field to a loading rack near Stroud.

In the new areas of Seminole, Hughes, and Okfuskee Counties the larger developments have been reported. The Oklahoma Pipe Line Co.'s 12-mile extension of 4-inch from Wetumka to Wewoka has been mentioned. The Prairie Pipe Line Co. changed about 15 miles of 2-inch to 4-inch on its line from Okemah to Wewoka. In Township 9-9 the Prairie Pipe Line Co. is taking this oil through its 6-inch extension from Okemah to Cromwell. The Gulf Pipe Line Co. also dropped a 4-mile extension from its 4-inch line in Section 21-10-9 to Section 9-9-9. In Township 11-8, the Sinclair Pipe Line Co. extended a 2-inch line from its Cromwell line to Section 1-11-8, about nine miles.

The Marland Refining Co. extended a 6-inch line from its Tonkawa terminus to the new development centering in Section 15-25-2w, about six miles west.

Refinery Connections

The Pure Oil Co. laid 35 miles of 4-inch line from its Yarhola lease in Township 15-7 to its Bald Hill station, where it connects with the Muskogee refinery of the Oklahoma Producing & Refining Co., a subsidiary.

The Johnson Oil Refinery Co. laid about 15 miles of 4-inch line from its Cleveland refinery to Wildhorse station, in the Osage, connecting with production in Townships 22-10 and 23-10.

The Kay County Gas Co. (Marland) ran a 6-inch line to a point 12 miles east of its Burbank terminus for the new lime production south of Pawhuska, in Township 25-8 and then extended it eight miles south to its highly productive area centered in Section 20-23-8.

The Kay County Gas Co. (Marland) finished a 4-inch line from the Watchorn Pool in Pawnee County to a loading rack at Red Rock, 11 miles west. The Magnolia Petroleum Co. has completed a combination 4-inch and 5-inch line from the Watchorn Pool to its main line, ending in the Burbank Field.

The Empire Pipe Line Co. completed about 20 miles of gathering lines in the Hewitt and Graham Fields, about evenly divided between 4-inch and 6-inch line. Two new pump station were finished.

The Kay County Gas Co. (Marland) has completed its 8-inch line from the Ponca City refinery to the new Rainbow Bend production in Section 20-33-3e, western Cowley County, Kansas. The line will be extended on to the deeper production in Section 9-33-3e with 6-inch, making a total of 38 miles of line, the largest amount of new major pipe line construction work in that State during the present year.

Kansas Lines

In Russell County, Kansas, the Sinclair Pipe Line Co. laid a 3-inch line from the Valierus Oil & Gas Co.'s discovery well to Paradise station, 10 miles north, where a loading rack has been constructed for rail shipments to Sinclair refineries.

Several small extensions to the gathering systems were made by crude buyers in Greenwood County, as the producers continued to complete new wells. The Empire Gas & Fuel Co. was among the leaders in this work, laying eight miles of new gathering lines in that region during the first six months of 1924.

The Empire companies completed a 6-inch welded line from the Burbank Field to the refinery at Ponca City, a distance of 27 miles. This line will be used to supply gas to the refinery for fuel purposes. The Deer Creek Pipe Line Co. also has finished an 8-inch line approximately 35 miles long from the gas field at Deer Creek to Enid, where it will be distributed.

North Louisiana-Arkansas

In northern Louisiana the most important is completion of the line of the Standard Pipe Line Co. from the Cotton Valley Field in Webster Parish, which opens up this new district and affords an outlet for its rapidly increasing production. The line consists of 11 miles of 8-inch and extends from the Cotton Valley Pool to the main line in the Homer Field.

The Standard started the construction of a line in the latter part of 1923 from a point near DeQueen, Ark., on the Oklahoma-Arkansas State line, to Moore Station, near Shreveport. The line has been completed and consists of 19 miles of 12 inch and 181 miles of 8-inch. The Standard has also completed a loop in their line from El Dorado to Haynesville consisting of eight miles of 8-inch line.

The Gulf Refining Co. has just started the construction of an 8-inch line from El Dorado, Ark., to Dubberly, just east of Shreveport, a distance of 57 miles and a 6-inch loop from Dubberly south to Timpson, Texas, a distance of 42 miles.

The Louisiana Oil Refining Corp completed an extension of its Shreveport-El Dorado line consisting of 12 miles of 6-inch from El Dorado to Louann, and a complete gathering system through the Smackover and El Dorado Fields. It has constructed three miles of 6-inch from the Cotton Valley district to a loading rack on the Louisiana & Arkansas Railway.

Monroe Gas Line

H. C. Morris, trustee, has completed the construction of a gas line from the gas field two miles north of Bastrop in the Monroe gas field, south across the Ouachita River to West Monroe. The line is 24¼ miles in length and consists of 10½ miles of 8-inch, 9¼ miles of 10-inch and 4½ miles of 12-inch. The line will furnish fuel to the new $2,000,000 paper mill just completed and many other manufacturing enterprises in this district.

The Texas Co.'s main line ran directly through the Cotton Valley district and the opening up of this pool necessitated only the laying of a small system of gathering lines. Its 80 miles of 10-inch from Smackover to Shreveport was completed before the first of the year.

The Standard Pipe Line Co. has laid an 8-inch line beginning at its pump station in the southwest of Section 6-16-15, Union County, Arkansas, and running south to the Standard Oil Co., 2,000,000-bbl earthen storage tanks in Section 25-16-16 and Section 30-16-15, Union County, Arkansas.

The Standard Pipe Line Co. has laid an 8-inch line, beginning at the southwest corner of Section 21-16-15, Union County, Arkansas and continuing west across Section 19 and 20-16-15 to Section 24-16-16. The Standard Pipe Line Co. has also laid an 8-inch loop for a distance of approximately nine miles,

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LOSSES FROM OVERPRODUCTION LESSENED BY GROWTH OF EXPORTS

By N. O. Fanning

NEW YORK, July 28.—That the oil export trade is an important part of America's foreign commerce is shown by the fact that oil exports in 1923 were valued at $361,000,000. Although representing only about 13 per cent of the total consumption of American crude and refined oil in 1923, oil exports were a factor which softened considerably the effects of overproduction. The further extension of the export trade would undoubtedly do much to bring the American oil industry back to normal. Many believe the export field for American oil products is almost unlimited.

The port of New York serves as one of the greatest oil export centers of the United States. There are three major refineries here equipped especially to handle the oil export trade, having docking facilities and the many accessories necessary to prepare oil for the export markets, such as case and can factories. In numerous countries oil must be supplied in cases or barrels or not at all. Only to Europe are bulk oil shipments common.

During the last six weeks oil products were exported from New York to 36 different countries, including 7 countries of South America, 4 islands of the West Indies, Canada, 8 countries of the Far East, 2 countries of the Near East, 3 countries of Africa and 11 countries of Europe, as follows: Argentina, Uruguay, Venezuela, Brazil, Chile, Colombia, Trinidad, Dominican Republic, Bermuda, Haiti, Jamaica, Canada, Japan, Australia, China, India, Philippines, Straits Settlements, Dutch East Indies, Persia, Turkey, Egypt, British South Africa, Angola, Canary Islands, Germany, France, Denmark, Sweden, England, Spain, Holland, Italy, Belgium, Norway and Finland. No doubt some of the oil exported to these countries found its way ultimately to others.

Coal to Newcastle

It will be noticed that 5 of the 36 countries mentioned are major oil producing countries, and it might be asked why refined petroleum should be exported thousands of miles to countries in which oil is produced and refined. The answer undoubtedly is that either American oil companies have been able to hold their customers which they supplied before oil was developed, or that the grade of oil produced in such countries does not supply as good a grade of products as can be supplied from the United States.

The five countries which received oil from New York and which are producing countries are Venezuela,

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Luling Featured Southwest in First Half

In New Production and in Total Output It Led the Best of the Gulf Coast Fields

By P. L. McGreal.

During the first six months of 1924 a total of 718 wells were completed in the Gulf Coast and Southwest fields, 173 of which were either dry or salt-water wells. Some of the latter eventually become producers, after setting packers. The new production totals 287,496 bbls. Compared with the same period in 1923 this is a decrease of 240 in the number of wells completed, a decrease of 62 in failures and an increase of 93,480 bbls. in initial output. The Luling Field is responsible for the increase in new production.

The completions in the Coastal pools alone number 476, with 121,729 bbls. new production and 173 dry holes or salt-water wells. Compared with 1923 this shows a decrease of 243 in the number of wells completed, a decrease of 43,322 bbls. initial output and a falling off of 83 in the failures listed.

In the southwest fields wells completed during the first half of the present year total 242, of which 85 were in the Luling Field and 85 in the Laredo district. The new production aggregates 165,767 bbls. and the failures number 32 with 29 gas wells. The Luling Field contributed 150,300 bbls. of the total new production in that division. A comparison with the same period in 1923 is not possible, since the Luling Field did not develop big wells until August, 1923, and during the months following.

The Guif Coast division reflects the effect of curtailed operations in all the pools. The only pools showing increases in new production are Batson, 1,175 bbls., due to a big well by the Gulf Production Co. that did not hold up long; Humble, 1,717 bbls. were two big deep sand wells added to the total. The Hull Pool increased 7,295 bbls., while showing a decrease of 28 in the number of completions. The Republic Production Co. and Houston Oil Co.'s joint No. 76 Dolbear was estimated at 15,000 bbls. and the Humble Oil and Refining Co.'s No. 1 Sterling, the farthest northwest extension from the dome, come in making 12,000 bbls. The Texas & Vacuum Oil Co. jointly extended production 1 mile on the southwest side of the dome. These three wells are the outstanding features of development work in that pool for the six months. Spindletop and Saratoga show light increases. A 2,000-bbl. well was the only completion of consequence in the Markham Pool.

The big declines are in the Goose Creek, West Columbia and Orange pools. In the first named, 55 fewer wells were completed and new output fell off 12,350 bbls. West Columbia was neglected, 31 fewer wells having been drilled and new production dropped 11,195 bbls. Both are deep sand propositions in which the productive area has been defined and practically drilled up, although The Texas Co. has a lot of undeveloped acreage on the north side of West Columbia that is considered promising. The Orange Pool declined 7,815 bbls. in the amount of initial output. Efforts to extend the pool to the north, west and east were unsuccessful and the southeast extension made last year by the Sun Oil Co. and Brownie Babbittee Oil Co. has not been as encouraging as the first wells indicated. Two notable deep tests were drilled in that pool, the Gulf Co. sending the drill more than 5,300 feet in one and the Rycade drilling 4,580 feet in Cow Bayou. Sixty per cent of the work in that pool was confined to resetting screens or deepening old wells in the original part of the district. Damon Mound in the northwest part of Brazoria County, is another district where work was cut to the bone. The Sinclair Oil & Gas Co. holds the bulk of the acreage there. Its attempt to get through the heaving shale on the Becker was abandoned. The Humble Oil & Refining Co. drilled a few tests that were barren and the Southern Petroleum Co. shut down completely. One well at Barber Hill did not hold up and the Blue Ridge Pool fell off, while Pierce Junction is a blank for the period under review.

Semi-Pools.

In such semi-pools as Hockley salt dome in Harris County, one 77-bbl. well was developed on the north side. The Houston Oil Co. has a few small wells at Big Hill Jefferson County. A well on the northeast side of Stratton Dome in Brazoria County pumped 100 bbls. per day for a month and quit. Some shallow sand wells were found at High Island, Galveston County and one small deep sand producer. The Sun Co. is doing development work there. The Guf and Snowden & McSweeney met with better success at Big Creek in Fort Bend county, seven miles south of Richmond. A potential production of 3,500 bbls. per day is reported shut in there.

The only new discovery in the Coastal region was the Boling Dome in Wharton County, 12 miles west of Big Creek, where the Gulf-Atlantic Oil Producing Companies jointly are drilling tests trying to define the salt area. In truth but little wildcatting has been done in the Gulf Coast Plains, work being confined to efforts to develop production on and around the semi-pools mentioned.

South Louisiana.

Vinton continues the most active of the South Louisiana pools, with but little effort being made to extend its limits. A few worked-over wells kept the Edgerly pool on the map. The Rycade Petroleum Co. made two attempts to find a deep sand in the Jennings Pool, drilling on the south side. The second test was drilled 3,480 feet.

The Johnson Bayou Prospecting Co. (C. N. Scott and associates) drilled seven formation tests to around 1,000 feet in the southwestern part of Cameron Parish and the Vacuum Oil Co. drilled six holes north of Lake Charles. No. 7 is now drilling. Nothing was developed in the others beyond favorable showings of oil and gas, enough to justify further exploration work.

Gross Production.

The estimated gross production of the Coastal pools and southwest fields for the six months under review totals 21,446,206 bbls., or a decrease of 98,602 bbls. when compared with 1923. The total for the Gulf Coast alone is 15,215,601 bbls. and for the southwest fields 6,230,607 bbls.

Southwest Fields.

The Luling Field hit the high water mark in new production in May when 24 wells were completed with 69,600 bbls. new production, the largest percentage of it being on the Guadalupe County side. The new production in April was 36,050 bbls. and in June it dropped to 13,000 bbls. The United North and South Oil Co. which has the largest production and acreage in the field, shut down drilling late in May and placed its properties on the market. It is now resuming drilling operations. The original operations started in Caldwell County on th eeast side of the San Marcos River, the production coming from a porous lime at 2,100-2,150 feet. During the first half of 1923 the production from nine wells was estimated at 5,000 bbls. per day, with the wells partially shut in. The field has seen a marvelous increase in the intervening year, having been extended 3½ miles to in the southwest into Guadalupe County. best wells in the extension are on the Allen, McKean, Marinos, Schubert and Baker lands. The structure varies in width, the widest spot being about 2,500 feet. Along this long, narrow structure are some 170 wells, with a daily average production of 50,000 bbls. Slight extensions of the productive area to the northwest were made during the past six months. Tests to the south, west and east have been unproductive and drilling now is being done far to the west and southwest on what is presumed to be another structiure.

The field has been handicapped by a lack of a trunk pipe line, all the crude shipped out in tank cars over the Southern Pacific or San Antonio and Arkansas Pass railroads. The Magnolia Petroleum Co. is now laying an 8-inch line from the field to Magpetco, below Beaumont on the Neches River, a distance of 220 miles and expects to start oil through the line late in July.

(Continued on Page 112)

GULF COAST AND SOUTHWEST TEXAS

Summary of Completed Work in the first Six Months of 1924.

Districts—	Comp.	Prod.	Dry or S.W.	Gas
Batson	35	2,625	5	0
Big Creek	6	2,125	2	0
Blue Ridge	6	3,450	2	0
Barber Hill	1	1,000	0	0
Dayton	1	0	1	0
Damon Mound	10	130	5	0
Edgerly (La)	10	815	1	0
Goose Creek	52	6,465	16	0
Humble	18	7,430	5	0
Hull	93	85,380	31	0
Jennings (La)	11	125	7	0
Markham	2	2,000	1	0
Orange	89	32,425	32	0
Pierce Junction	5	0	5	0
Spindletop	18	563	4	0
Saratoga	12	55	8	0
Sour Lake	22	1,955	9	0
Vinton (La)	35	3,045	7	0
West Columbia	12	895	3	0
Miscellaneous	38	1,246	29	3
Totals	476	121,729	173	3
Decrease, completions				243
Decrease, new production				43,322
Decrease, dry holes and s.w.				83

Southwest Fields

Districts—	Comp.	Prod.	Dry	Gas
Luling	85	150,300	4	6
Laredo	85	12,535	17	11
Somerset	9	85	1	1
Rock-Minerva	20	242	2	2
Callihan	43	2,605	8	9
Totals	242	165,767	32	29

Grand Totals

	Comp.	Prod.	Dry	Gas
1st six months 1924	718	287,496	205	3
1st six months 1923	959	194,016	267	0
Difference	241	93,480	62	3

Estimated Gross Production of the Gulf Coast Plains Territory From 1901 to 1923, Inclusive:

Pools—	Year opened	Area (acres)	Gross Prod. (bbls.)
Spindletop	1901	240	48,009,794
Sour Lake	1902	1,200	63,602,348
(Deep sands 1914)			
Jennings (La.)	1902	.....	35,305,951
Batson	1903	400	31,429,909
Saratoga	1904	1,000	28,851,498
Matagorda Co.	1904	.....	2,769,864
(Big Hill and Markham)			
*Humble	1905	3,300	71,871,696
Anse La Bute-			
Welsh (La.)	1905	.....	740,015
Dayton	1905	.....	615,348
Vinton (La.)	1910	.....	21,992,008
Goose Creek	1912	2,000	45,207,505
(Deep sands 1916)			
Edgerly (La.)	1913	.....	6,748,201
Terry	1913	.....	12,464,257
(Now Orange)			
(Deep sands 1922)			
Damon Mound	1917	255	5,040,174
Hull	1917	1,500	29,478,541
West Columbia	1917	360	48,525,560
Barber Hill	1918	.....	543,757
Blue Ridge	1919	.....	1,307,449
Pierce Jct.	1921	.....	2,488,749
Big Creek	1922	.....	54,400
High Island	1922	.....	17,940
Stratton Ridge	1922	.....	19,875
Total			457,084,839

*Deep sands discovered 1915.

PRODUCTION OF THE GULF COAST FIELDS BY MONTHS FOR THE FIRST SIX MONTHS OF 1924

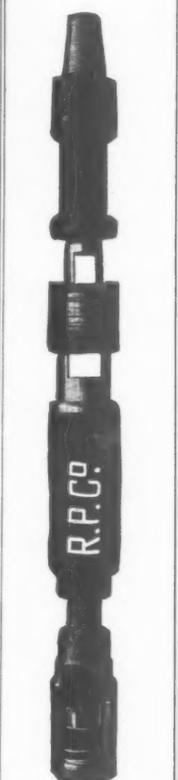
	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total Bbls.	No. Oil Wells June	Av. Daily Prod. Per Well June Bbls.
Batson	34,472	31,640	37,231	38,850	48,298	45,450	235,941	351	43.16
Blue Ridge	20,987	14,900	20,212	22,800	40,703	39,030	158,632	16	76.52
Barber Hill	7,192	7,728	15,593	7,050	5,207	4,860	47,630	16	10.13
Dayton	2,759	2,670	2,914	2,730	2,666	2,580	16,319	10	8.59
Damon Mound	54,436	35,728	50,809	38,010	50,064	45,540	274,587	31	48.97
Edgerly, La.	10,912	11,900	15,717	11,580	14,043	16,920	81,072	16	35.25
Goose Creek	409,913	384,325	416,392	337,660	385,454	331,500	2,265,244	243	45.47
Humble	170,066	154,715	156,705	145,350	160,952	219,750	1,007,538	304	24.18
Hull	576,631	898,336	775,504	662,520	569,935	634,260	4,117,186	224	94.38
Jennings, La.	20,646	16,156	16,461	15,330	16,740	16,410	101,743	46	11.40
Markham	3,069	2,800	3,131	2,830	21,824	13,080	46,734	29	15.03
Orange	366,513	363,200	406,797	389,020	361,181	304,320	2,131,131	240	41.85
Pierce Junction	21,700	17,096	18,662	17,820	17,236	12,660	105,174	8	52.72
Spindletop	26,164	23,184	27,032	26,220	29,264	27,960	159,824	169	8.55
Saratoga	51,987	51,304	46,810	36,170	48,205	44,310	278,786	265	5.57
Sour Lake	148,335	134,820	149,916	139,040	142,383	134,850	849,344	403	11.15
Vinton, La.	169,105	152,622	168,051	154,980	161,448	159,180	965,386	95	55.85
Welsh-Anse La Bute, La.	2,542	2,530	2,790	2,550	2,635	2,460	15,507	6	13.67
West Columbia	485,522	284,048	413,199	383,760	364,994	335,070	2,266,593	109	102.47
*Miscellaneous	11,160	9,800	10,960	12,300	17,400	29,610	91,230	25	39.48
Total	2,594,111	2,539,602	2,754,886	2,446,570	2,460,632	2,419,800	15,215,601	2,549	31.64

*Includes Big Creek, Fort Bend County; Nacogdoches, Big Hill, Jefferson County; High Island, Galveston County; Stratton Ridge, Brazoria County; Hockley, Harris County; New Iberia, South Louisiana.

PRODUCTION OF THE SOUTHWEST TEXAS FIELDS BY MONTH FOR THE FIRST SIX MONTHS OF 1924

	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total Bbls.	No. Oil Wells in June	Ave Prod. Per Well in June
Luling	310,000	437,900	544,250	865,500	1,187,300	1,386,000	4,830,950	154	303.90
Laredo	111,600	100,800	117,800	117,030	126,883	125,400	699,513	285	14.67
Somerset	80,879	70,700	81,251	74,250	77,186	75,360	459,626	229	10.97
Callihan	21,700	21,000	24,800	24,800	24,800	23,880	140,980	27	29.48
Rockdale-Minerva	16,740	15,400	17,360	16,650	17,608	99,538		183	2.87
Total	540,919	645,800	885,461	1,098,230	1,433,777	1,626,420	6,230,607	878	61.75

Nimble Fingers Directed by Brains Leaves to Posterity More Than That Which is Cut on Their Tombstones



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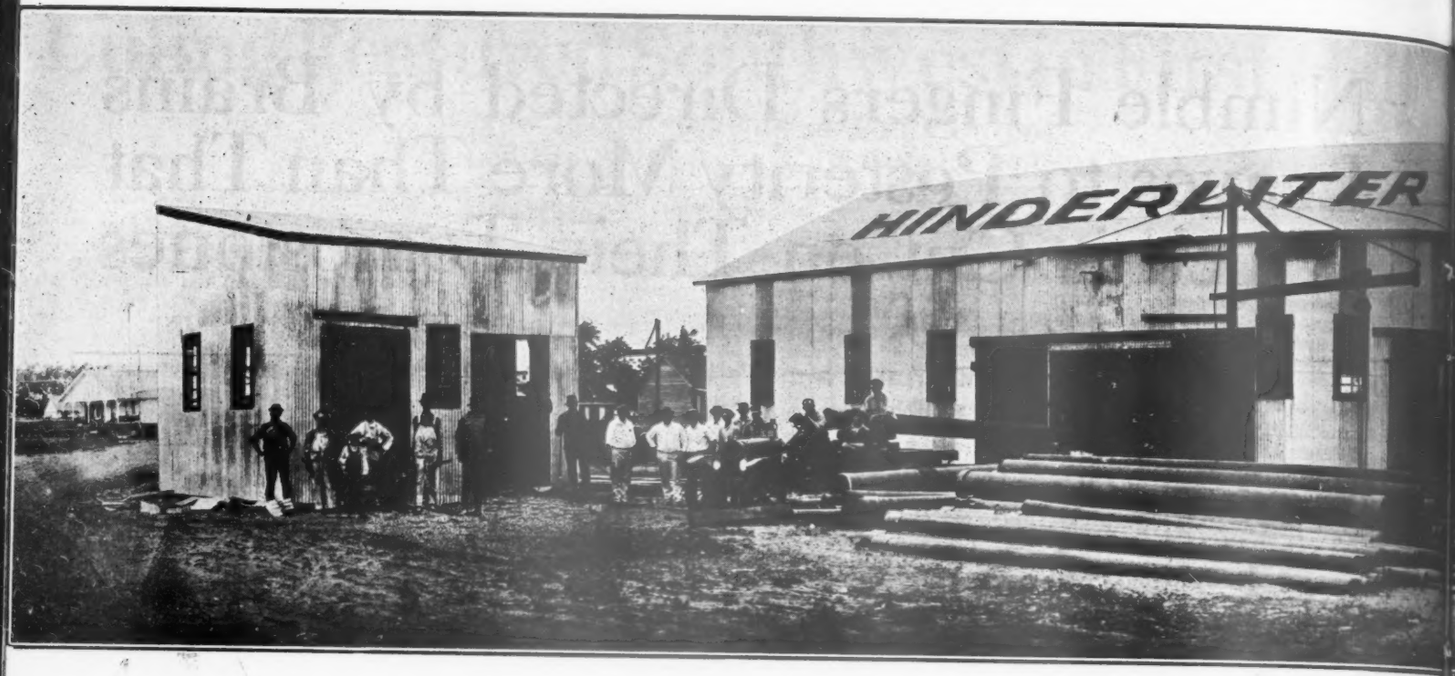

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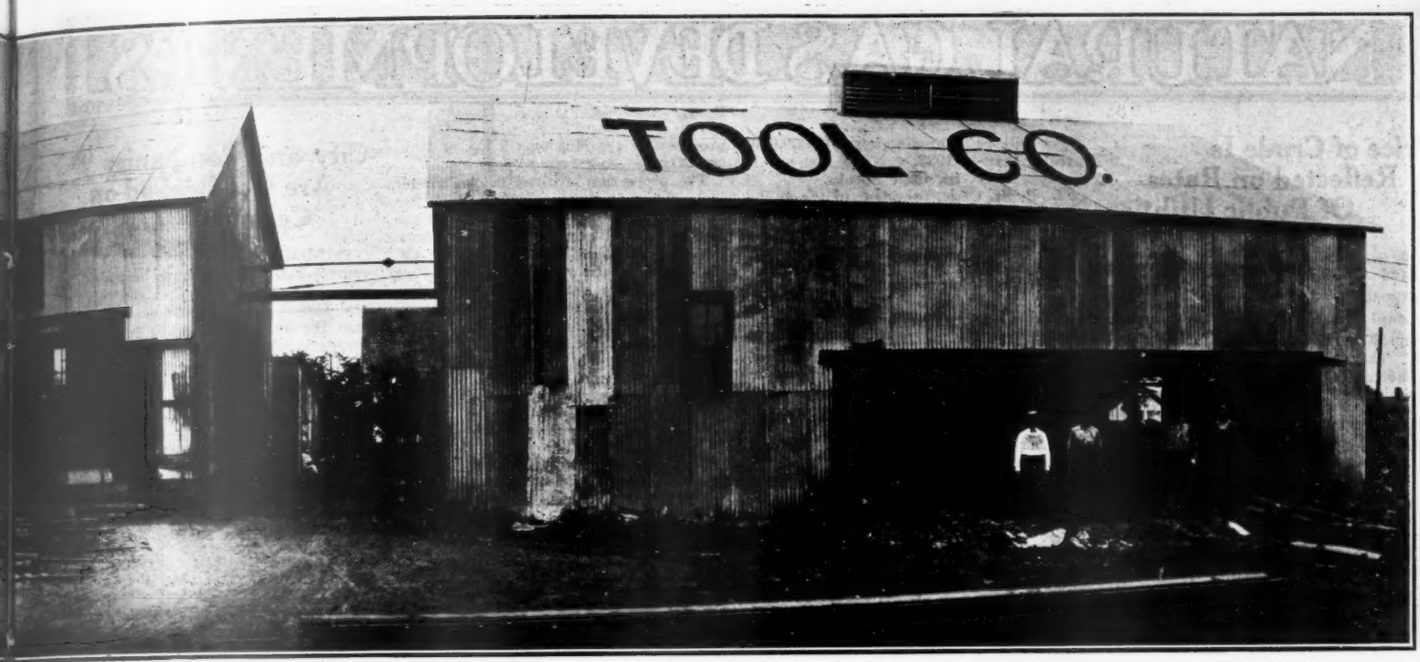

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PRINCIPAL OIL FIELDS

NATURAL GAS DEVELOPMENTS

Price of Crude Is Reflected on Rates Of Public Utilities

By L. P. Stockman

LOS ANGELES, Cal., July 25.—Approximately 200 operators and supply men attended the second monthly get-together luncheon of the Chamber of Mines and Oil. The principal speaker was H. W. Brundige, California State Railroad Commissioner, who discussed the relation of the petroleum industry to the public utilities.

Mr. Brundige ponted out that the regulation of public ultilities in California is closely associated or tied in with the petroleum industry and any fluctuation in the production or price of oil is immediately reflected in the rates and service of a number of the chief utilities of the State. The railroad commission for the last two years has kept in effect a sliding scale of rates for manufactured gas and steam heating service, based on the prevailing price of fuel oil. All rates for manufactured gas, which is produced from oil are automatic at the present time, the rate varying on the basis of approximately 2.1 cents per 1,000 feet for each 10 cents increase or decrease in the price of oil per barrel. An increase of 25 cents per barrel in oil will automatically result in an increase in the public's bill for gas service in California of $1,150,000 per year.

In this connection, however, it is interesting to observe that the cost of regulated fuels in California has not increased in the same ratio that unregulated necessities of life have increased. Figures collected by the United States Department of Labor recently showed that the price levels now prevailing for all necessities of life as compared with those of the pre-war period of 1913 have increased an average of 70 per cent, while the average rate paid for gas throughout California during 1923 was 52.8 cents per 1,000 feet, or approximately 20 per cent less than the average pre-war rate of 1913. This is in striking contrast to the increase of 81 per cent in fuel costs throughout the United States noted by the Department of Labor.

Use of Gas Increasing

The California figure includes the total sale of gas by California gas utilities and the decrease in price over pre-war conditions has been made possible by the enormous use of gas by California industries. Many industries in this State use gas exclusively for fuel by reason of its lower cost, greater convenience and its ability to adapt itself to very close regulation. Electric utilities in California will use approximately 10,000,000 bbls. of fuel oil durig 1924, due to dry year conditions, as against 3,000,000 bbls. in 1923. Gas utilities will use 4,500,000 bbls. of gas oil this year, as against 4,200,000 bbls last year. The increase in the use of oil due to present conditions represents approximately 7,000,000 bbls. in excess of that which would be required in a normal year. In addition to this, the utilities are using natural gas equivalent to more than 1,000,000 bbls. of gas oil.

For the year 1924 the oil bill of the gas and eletric utilities will be approximately $20,000,000. The steam railroads operating in California, using oil for fuel on their western divisions, used 26,000,000 bbls. of oil in 1923 for their entire system. Their fuel bill for oil per year approximates $35,000,000 to $40,000,000. Every 10 cent increase in the price of oil for the steam roads represents an increase in operating expenses of $2,600,000 per annum. The fuel bill for the electric utilities in California in 1924, due to increase in the price of oil and increased use due to dry year conditions will be approximately $10,000,000 greater than in 1923.

L. P. St. Clair Speaks.

L. P. St. Clair, president of the Independent Oil Producers' Agency and vice president of the Union Oil Co., stated that in his opinion the petroleum industry should first take care of the needs of the United States Navy and then guarantee to fill the requirements of the several public utilities. In the past the various gas and electric companies have been in the habit of negotiating long-time contracts for gas and fuel oils, subject to reduction in price, but not to any increases. The State Railroad Commission regulates the rates for electric energy and manufactured gas, according to the price paid for oil. Mr. St. Clair stated that, in his opinion, the California railroad commission should establish a precedent by permitting the various public utilities to purchase gas and fuel oils at the open market price, that is, the prevailing price of these commodities to private individuals or manufacturers. In this way the public would benefit by each reduction in gas and fuel oils during periods of high production and pay slightly higher rates during the periods of smaller production or increased demand. This, he stated, is the most equitable way of adjusting prices to the mutual benefit of both producer and consumer. The industry, in return, would, of course, guarantee to take care of the public utilities, second only to naval requirements in times of both high and low production.

SUBSIDIARY TAKES OVER GAS BUSINESS

The Kingwood Pipe Line Co. has been incorporated in Delaware as a subsidiary of the Kingwood Oil Co. of Okmulgee, Okla. The stock is owned by the Kingwood Oil Co.

The gas business of the Kingwood Oil Co. has been sold to the Kingwood Pipe Line Co. as of July 1. This includes 161 miles of main and gathering lines in practically every direction from Okmulgee, except north, with most of it south, and the big pump station known as the Kingwood Station on the Henryetta Highway.

The formation of the subsidiary pipe line company was made necessary by the Corporation Commission's holding, sustained by the Supreme Court, that the Kingwood Oil Co. was a public service corporation because of its gas business. The consequent exercise of control over the company's business by the commission was objected to from the oil producing angle.

The incorporation of the Kingwood Pipe Line Co. and separation of the gas and oil business, leaves the oil producing end in the hands of the Kingwood Oil Co.

The officers of the new subsidiary are the same as of the Kingwood Oil Co., J. T. King, president; Sowler Graham, vice president; W. E. Wood, secretary and treasurer, and F. M. Wood, assistant secretary and treasurer.

The Southern States Gas Co., distributing company at Weleetka, is also a subsidiary of the Kingwood Oil Co.

PANHANDLE MERGER CHARTERED IN DENVER

The merger of a number of the gas producing, transporting and marketing companies in the Panhandle in Texas was formally launched in Denver when interests identified with the Producers & Refiners Corp. and the Prairie Oil & Gas Co. incorporated the Southwestern Development Co. in Colorado with an authorized capital of 50,000 shares of no par value. The directors of the new company are Nelson K. Moody, W. S. Fitzpatrick and Dana H. Kelsey of the Prairie Company; Frank E. Kistler, chairman of the board of the Producers & Refiners Corp., and Albert R. Jones, president of the Mission Oil Co. of Kansas City.

The properties involved in the merger include the Amarillo Oil Co., which has 50,000 acres under lease, 12 immense gas well and a 78-inch pipe line which transports gas to the United States Zinc Co. smelter at Amarillo; the Panhandle Pipe Line Co., which owns an 8-inch pipe line from the gas field to Amarillo; the Amarillo Gas Co., lical distributors of gas in that city; and the Mountain States Gas Co., which has 250,000 acres under lease and of which the Producers & Refiners owns 51 per cent of the stock.

WEST VIRGINIA WELL'S NON-INFLAMMABLE GAS

PITTSBURGH, Pa., July 28.—The Reserve Gas Co., while drilling at a depth of 3,200 feet at its proposed deep test on the Joseph Gordon farm, near Terra Alta, Portland district, Preston County, West Virginia, struck a flow of gas estimated at 4,000 feet a day. Gas at that level, presumably the Gordon sand, is not unusual, but the quality of the gas differs from any ever struck in the eastern fields. When the gas was conducted through a lead line some distance from the well an attempt was made to set it on fire and it would not burn. They arrived at the conclusion that it was helium gas and decided to have it analyzed. A sample of the gas was obtained from the well and sent to the laboratory of the Mellon Institute in Pittsburgh. The analysis was made by Miss Miller, analyst, and the following results obtained.

Methan	1.80
Ethane	1.20
Carbone dioxide	None
Unsaturated hydrocarbons	None
Hydrogen	None
Oxygen	16.90
Nitrogen	80.10
Hydrogen sulphide	None
	100.00

It is simply an inert gas, according to the test, and the mixture only about 3 per cent of combustible matter and accordingly high in nitrogen content. The sample submitted, the report stated, contains a very large portion of air (16.90 per cent) as shown by the oxygen.

Had the gas stood the test and proved to be helium—it would have been an important discovery. The only place helium is produced in this country is in Texas and during the World War the entire output produced was requisitioned by the United States Government. The fact that it is noninflammable makes it more valuable than the natural gas of commerce for inflating balloons and airships. The Reserve Gas Co. is not fully satisfied with the analysis from the gas submitted and will send a sample to Washington to have it analyzed.

TO EXTEND GAS LINE TO ROANE COUNTY, W. VA.

PITTSBURGH, Pa., July 26.—The Manufacturers Light & Heat Co. has taken the preliminary steps to extend its gas line from Wetzel County, West Virginia, to Roane County, a distance of approximately 70 miles. For some time Roane County has been supplying large quantities of natural gas and is the incentive for the company to lay a 12-inch line to the field. It is estimated it will cost $1,500,000 to construct the line and build pumping stations. When completed it will be the longest line constructed in the eastern fields in a number of years. The Manufacturers Light & Heat Co. has its old territory in Wetzel, Marshall, Monongalia and Doddridge Counties pretty well worked over and the contemplated line will give it access to the new field in Roane County.

City and Companies Are Deadlocked on Columbus, O., Rates

COLUMBUS, Ohio, July 28.—The gas controversy in Columbus, in which the Columbus Gas & Fuel Co., and the Federal Gas & Fuel Co. are seeking to obtain the granting of a 10 per cent increase in the cost of 1,000 feet of gas to the consumer, has been left practically in the hands of counsel for settlement, as the result of a conference with L. B. Denning, president of the Columbus Gas & Fuel Co., during which council voted unanimously to oppose the proposed advance.

Immediately following the vote Mr. Denning, along with other officials, left the meeting, saying that he was sorry that they could not come to an agreement.

The franchise of the Federal Gas & Fuel Co. has expired, but the Columbus Gas & Fuel Co. is operating on a practical, perpetual franchise and the latter must supply gas to Columbus consumers as long as it can obtain it.

"All the factors presented by our utility engineer shows that the various companies engaged in the production and distribution of natural gas to Columbus are making excessive profits at present prices," said Henry W. Worley, chairman of the committee investigating the gas situation.

"Council will deal with the gas companies on the basis of a fair return at any time they are willing to negotiate on that basis, but the vote is notification that we will resist to the utmost any attempt at extortion."

Mr. Denning said: "Placing the valuation on the companies properties at less than $3,000,000 is wrong. The valuation of these companies should be placed at between $6,000,000 and $7,000,000. At the present time we are forced to pay the Ohio Fuel Gas Co. 40 cents a thousand feet for gas and to attempt to distribute it to the consumer at such a rate—the basis on which council is considering, 40 cents per thousand feet—is foolhardy. How do you expect to get gas, when Cincinnati, for instance, is paying 75 cents for the first 1,000 feet of gas, 75 cents for the second; 60 cents for the third 1,000 and 50 cents per thousand for all over that amount?" Denning asked.

"Is it your contention that the matter of gas is a competition between cities?" Denning was asked.

"Yes, to a certain extent, as we must bid for the gas among the various fields," Denning replied.

Officials of the gas company indicated they would make an attempt to "carry their cause to the people." It is their intention to present the company's side of the controversy with council, in a series of statements, because, they explain, they were barred from presenting it to council by the "predetermined action of that body."

GAS LINES OF SAYRE DECLARED INADEQUATE

OKLAHOMA CITY, Okla., July 26.—A complaint against the Sayre Fuel Supply Co. of Sayre, has been filed with the Corporation Commission by the Western Power & Gas Co. of Oklahoma City in which the former is charged with laying gas lines in the Sayre district for a distributing system that would be inadequate and not in accordance with regulations of the commission with reference to gates, meters, etc. The Sayre company is to secure gas from a well of the Rubana Oil Co. in the Sayre Field. The commission set the case for July 22.

The Western Power & Gas Co. operates a pipe line and a distributing system at Sayre, having taken over the project of the Oklahoma Public Utilities Corp.

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The best reason we can offer you for using SPANG Weldless Jars, is this—long wear and absolute satisfaction.

There are several causes that make that Service possible. For instance—SPANG Weldless Jars are made from one piece of tough alloy steel. All forging strains are carefully removed in SPANG Jars. They are carefully and evenly heat treated. They have longer wearing heads.

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BUTLER, PENNA.

MEN KNOWN IN OILDOM

Dorset Carter

Dorset Carter, for several years president and general manager of the Coline Oil Company, the Healdton Pipe Line Company and the Folsom Norris Coal Mining Company, has been succeeded by F. H. Keefe of Chicago, a member of the Santa Fe Railway staff. Mr. Carter resigned to engage in the oil and pipe line business independently. He is laying a line in the Amarillo Field.

H. L. Briggs, formerly of the Midway Oil Company of California and a geologist and operator in that State for several years, was elected vice president and general manager of the three companies and he is in charge of the general offices in Oklahoma City. C. W. Sowle remains secretary and treasurer and no changes were made in the geological staff. J. R. Franklin, who was in the auditing department of the companies, was promoted to the position of purchasing agent and superintendent of the Coline land department.

The lure of the Panhandle drew Mr. Carter away from the Santa Fe organization. At one time, on his recommendation, the Coline Company considered 'entering' that territory. When it concluded not to do so, Mr. Carter made personal investments there, taking over the Whittington well and several thousand acres of leases. Mr. Carter, who was president of all the branches of the Santa Fe system in Oklahoma, was placed at the head of the Coline after its purchase by the Santa Fe from Ardmore men several years ago. It was this company that made a fortune for each of 12 men, among them United States Senator J. W. Harreld. Each invested $175 in the company's stock and each received at the sale one-twelfth of a million dollars in cash.

PERSONAL PARAGRAPHS

M. O. Danciger, of the Danciger Oil & Refining Company, Kansas City, Mo., was in Tulsa during the past week.

* * *

C. C. Kribbs of Knox, Pa., after spending some time at Pasadena, Calif., is now at home for a couple of months.

* * *

W. L. McLain of the General Petroleum Corporation, San Francisco, Calif., has been enjoying a vacation in Wyoming.

* * *

W. H. Jeffery, president of the Eastern Torpedo Company of Ohio, Toledo, was in Tulsa, on a short business visit last week.

J. L. McCauley, for several years with the Walrath Company at Denver, Colo., is now with George J. Hausen in the Los Angeles office.

* * *

W. B. Robb, secretary of the Independent Oil Producers Agency, a California association, was in Los Angeles during the past week.

* * *

G. M. Swindell, secretary of the Chamber of Mines and Oil, Los Angeles, is reported recovering from a recent operation for appendicitis.

* * *

Charles E. Markey of the Link-Belt Company, Indianapolis, Ind., was in Tulsa recently, while making a trip through the Mid-Continent.

* * *

Jay P. Walker, vice president of the American Tank Company, Oklahoma City, spent several days in the Tulsa offices during the past week.

* * *

R. S. Gray, assistant superintendent of the land department of the Prairie Oil & Gas Company, Tulsa, has returned from a short business trip to St. Louis.

* * *

Fred H. Merritt, geologist of Perry, Okla., who has been interested in developments around Oxford, Kans., stopped in Tulsa a few hours during the past week.

* * *

V. H. McNutt, petroleum geologist, returned recently to Tulsa, after making a survey of the activity and conditions in the Pecos River Valley of New Mexico.

* * *

E. T. Caffrey of Washington, Pa., president of the Emerald Petroleum Company, visited the properties of the company in Beckham County, Oklahoma, recently.

* * *

J. S. Lehman, president of William S. Barnickel & Company, St. Louis, Mo., makers of Tret-O-Lite, and E. O. Sanguinet, sales manager, were in Tulsa during the past week.

* * *

William N. Davis, president of the Mid-Continent Oil & Gas Association, spent a few days in Tulsa last week prior to his trip to Washington and New York City.

* * *

H. A. Meyer, assistant to the vice president and general manager of the Prairie Oil & Gas Company, Independence, Kans., was in Tulsa on business during the past week.

* * *

Kenneth H. Sessions of the Oil Well Supply Company, Pittsburgh, has resigned after several years of service, and has gone to California where he hopes to regain his health.

* * *

D. H. Greenwood, Los Angeles manufacturer of oil field equipment, returned to his home recently after an extended inspection trip which took him through most of the fields of the Mid-Continent.

* * *

N. K. Potter, secretary of the Mount Diablo Oil Company, has been watching the work of the wildcat operations in the San Joaquin Valley, California, near which he has personal interests.

* * *

W. W. Stalder, a consulting geologist with headquarters in San Francisco, spent several days in Los Angeles during the past week looking over conditions in the flush southern California pools.

* * *

J. J. Durst of the Oil Well Supply Company of Casper, Wyo., general manager of the Rocky Mountain division, has returned from a trip through the Montana fields and the Big Horn Basin.

* * *

John Fertig, controller of the Producers & Refiners Corporation, together with S. H. Sandhagen, chief accountant for the same company, were visiting the Tulsa offices of the concern recently.

* * *

J. W. Anderson, sales agent for the Sheffield Steel Mills and the Kansas City Bolt & Nut Company, Kansas City, Mo., stopped in Tulsa recently on his trip to various points in the Southwest.

* * *

Miss Florence Mathews of the scouting department of the Sinclair Crude Oil Purchasing Company, Tulsa, has returned from a vacation spent in Hamilton, Ont., and Montreal, Quebec, Canada.

* * *

John P. Herrick, a New York State oil operator, who is well known in the Rocky Mountain fields, is expected in Casper in the near future and plans are being made by some of the fishermen for his entertainment.

* * *

C. A. Young, chairman of the standardization committee of the American Petroleum Institute, stopped in Tulsa recently on his way to New York from the Pacific Coast, where he has been attending conferences on standardization.

* * *

Southern Oklahoma operators are mourning the recent death of E. C. Million, at his home in McAlester, Okla. Mr. Million was one of the early investors in the Healdton Field, and profited largely from the development of the properties in that area.

* * *

T. J. Huffman, vice president and treasurer of the Penn-Mex Fuel Co., has returned to the home office in Pittsburgh, from a visit to the company's properties in Mexico. He reports the company is making satisfactory progress in its operations in the Mexican fields.

* * *

George C. Schaffer, manager of the oil field division for the Novo Engine Company, Lansing, Mich., has gone to the Rocky Mountain fields after spending some time in the Mid-Continent with headquarters in Tulsa. He was accompanied by L. H. Hitchcock, Mid-Continent sales manager for the same concern.

* * *

Christopher J. Yorath, city commissioner of Edmonton, Alta., Canada, has been appointed president and general manager of Northwestern Utilities, Ltd., the company which supplies Edmonton with natural gas from the Viking Field. E. G. Hill, the present general manager, will retain that office until January 1, 1925.

* * *

C. W. Chandler, for several years head of the purchasing department, was elected vice president in charge of sales and purchases at a recent meeting of the directors of the California Petroleum Corporation. C. E. Olmsted, technical refinery expert, was elected vice president in charge of transportation and refining.

* * *

E. G. Wright, retired superintendent of the South West Pennsylvania Pipe Line Company; John Darr, superintendent of the telegraph department of the Southern telegraph system, and J. J. Kenney, general superintendent of the Eureka Pipe Line Company, all of Pittsburgh, are spending several weeks at Cambridge Springs, Pa.

* * *

Thomas M. Bains, Jr., has accepted a position as associate professor of mining at the Colorado School of Mines at Golden, Colo. Mr. Bains has been in the mining department of the University of Illinois and prior to that time was a member of the faculties of the University of Minnesota, Case School of Applied Science, and Missouri School of Mines. He is a graduate of Cornell University and specialized at mining at Columbia University. He spent four years in the fields of British Columbia and Old Mexico.

* * *

Alfred W. Nash, B. Sc., M. I. Mech. E., M. Inst. P. T., has been appointed to the chair of oil mining at the University of Birmingham, Birmingham, England. Mr. Nash was educated at the University of London and started his career as a civil and mechanical engineer, afterwards taking up an appointment on the Persian oil fields. He was appointed senior lecturer in the oil mining department two years ago after spending 15 years in the oil fields of Burma, Egypt, Russia, Hungary, Rumania and Poland. For five years during this period he was general manager of an important group of oil companies operating in Russia. During the war he was engaged in the extraction of toluene from mineral oil for the French Government and during the latter part was attached to the R. A. F. as a technical officer.

Electrical Rotary Drilling Finally Perfected

Oil Well Supply Co. announces a new *electrical* application for Rotary Drilling; namely, the

"OILWELL" HILD DIFFERENTIAL DRIVE

(PATENTS PENDING)

After several years of theoretical and practical research and test, this, the next logical and most modern step in the development of drilling equipment, has been demonstated to be a marked success, and far superior to all other drilling methods.

The "Recording Charts" (which register and record a continuous log of drilling operations) are to the drilling industry what the Speedometer is to the automobile.

Write to us at Pittsburgh for full information.

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Exclusive Manufacturers

OILWELL SUPPLY CO

World's Largest Manufacturers of Oil Field Equipment

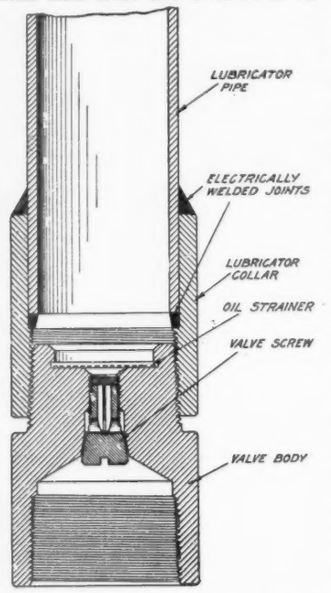
EQUIPMENT AND SUPPLIES

REGULATES OIL FEED TO ROCK BIT CONES

The Hughes Tool Co. has announced a new and improved valve for use on the Hughes lubricator. The valve has been designed to provide close regulation of the oil feed to Hughes rock bit cones. The lubricator tube when full contains sufficient oil to lubricate the cone bearings adequately for several days' continuous running. With the old type valve it was not possible to cut the flow down sufficiently and consequently most of the oil was wasted.

The new valve is similar to an ordinary needle valve and field results indicate that, with this close regulation, the bit can be run continuously for from 24 to 36 hours without pulling the bit to refill the lubricator. Another advantage of the new construction is the greater strength obtained in the lubricator tube. The old type valve had a thread cut on the lubricator tube, making it possible under certain conditions of severe vibration to break off the tube. In the new construction a steel collar is driven on the end of the tube and held in place by an electric double lap weld. This maintains the full strength of the tube.

The valve itself consists of a steel body threaded on one end with a standard male pipe thread to fit the above mentioned steel collar and threaded at the



lower end with a standard female pipe thread to fit the lubricator cage of the Hughes Rock Bit. The upper end of the valve body is countersunk and fitted with a brass perforated strainer the same as used in the old valve.

Through the center of the valve body is a threaded passage ending in a tapered valve seat. Into this passage the valve screw is fitted. This screw is of hardened steel, the threaded portion being drilled longitudinally and split two ways. When screwed all the way into the valve body the screw seats itself and stops the flow of oil. When backed out one turn a very small opening is made between the tapered seat of the valve body and the tapered head of the screw. This space is large enough to allow sufficient oil to pass for proper lubrication under average conditions. If the flushing fluid is cold it may be necessary to back out the screw two turns. The driller can soon get very close regulation of the oil feed by noting the contents of the lubricator after each run.

Field reports on the use of the new valve have been most satisfactory. Some drillers report they were able to run as long as 40 hours without refilling lubricator, as most successful operators require the pulling of the bit every 24 hours for inspection, it will be seen that the new valve has made it unnecessary to pull the bit for the sole purpose of refilling the lubricator. All new bits being shipped by the Hughes Tool Co. are now equipped with the new valve.

GULF REFINING CO. SAID TO HAVE PLACED ORDER FOR BIG PIPE LINE

By B. E. V. Luty

PITTSBURGH, July 28.—The steel trade is pegging along through the summer without developing any new trends, conditions having shown very little change since July 1.

The steel industry is producing and shipping at a rate of 40 to 45 per cent of capacity, but in point of tonnage a 40 to 45 per cent operation is now equal to 70 or 75 per cent before the war. Also, it is about one-fourth greater than the average rate during the year 1921, when conditions in steel really were dull.

There is no prospect of there being any great improvement in steel demand in the near future, say within the next few weeks, and some observers doubt whether there will be much improvement until after the election.

Recently there were hopes of any early and substantial improvement in July or August. These hopes must now be abandoned, because they were based on a belief that buyers were liquidating stocks, so that when liquidation was completed they would have to draw more heavily upon mills for their supplies. It is now quite well established that the liquidation was practically completed, except in a few special cases, in June, perhaps by June 1, so that whatever would be the influence of such completion of liquidation the steel market has already experienced it.

In other words, the steel making industry is now running in harmony with the rate of consumption and can only improve in position by general industrial activity increasing.

As to steel prices, it has been a case right along of hold as hold can. There has been no harmony between prices of the different steel products In a line in which there are many and aggressive competitors, as in sheets or plates, prices have had substantial declines from the level of last year. In lines like nails and pipe, where there are few competitors, prices have held.

In tubular goods, the interesting feature is in line pipe inquiry. While in merchant pipe and ordinary oil country goods, sold in relatively small lots, mills hold regular prices rigidly, large orders for line pipe usually go at concessions, unless the mills are already oversold. The dullness in the steel trade has accordingly brought out quite a lot of line pipe inquiry, prospective layers of line pipe realizing that now is the time to secure the closest prices. There is a large volume of inquiry now in the market, but the business is naturally being handled very secretly and even after orders are placed mills are not at all communicative as to what they have secured.

The Gulf Refining Co. is rumored to have placed an order for a 500-mile line to the coast, 8-inch and 10-inch, with the leading interest, but this cannot be confirmed. This would amount to about 75,000 tons and would be the largest line pipe order placed thus far this year In the first four months of the year very little line pipe was bought, while in May and June orders totaled about 80,000 tons. The Manufacturers Light & Heat Co., Pittsburgh, has placed an order for 70 miles, chiefly 12-inch, for a gas line.

There is a moderate volume of oil storage tank business going. The Magnolia Petroleum Co. has ordered tanks from the United Iron Works requiring about 1,500 tons of plates, and tank inquiries are reported to be in the market as follows: Superior Oil Co., 1,000 tons; Hoofer Oil Co., 800 tons, and Skelly Oil Co., 600 tons.

Pipe mills are estimated to be operating at about 60 per cent with the exception of the National Tube Co., which is understood to be operating at a considerably higher rate, on account of line pipe business. Oil country goods are doing a little better than merchant pipe in the matter of furnishing employment to the pipe mills.

TO HANDLE EQUIPMENT FOR PACIFIC COAST

The A. Y. McDonald Manufacturing Co. of Dubuque, Iowa, has recently completed arrangements with the U. S. Flexible Metallic Tubing Co. of San Francisco, Los Angeles and Seattle to handle for the Coast territory the A. Y. McDonald Manufacturing Co.'s complete line of oil equipment. T. J. Stephens is president of the U. S. Flexible Metallic Tubing Co., with headquarters at the company's San Francisco office. F. A. McDonald is in active charge at the San Francisco office, while M. F. Cralle shoulders the responsibilities of the Los Angeles office. Norman Campbell takes care of the selling end. J. A. Strehlow is manager of the Seattle branch.

The A. Y. McDonald line comprises practically all items of oil handling equipment used by jobbers and many items used by refiners and natural gasoline manufacturers. The company is said to be the world's largest maker of swing joints.

ELECTRIC WELDING OF LARGE STORAGE TANKS

The benefits of electric arc welding are brought out in a paper by Harold E. Price, E. M., of Bartlesville, Okla., entitled "Electric Welding of Large Storage Tanks." The paper was delivered at the New York meeting of the American Institute of Mining and Metallurgical Engineers.

"As far as can be determined, the first electric welding on large tankage was completed in May, 1922, when the Empire Companies discovered a badly leaking bottom in a 55,000-bbl. tank at El Dorado, Kans.," Mr. Price says. "In this instance, no new sheets were added, the bottom being repaired by electric welding of all seams and rivets. In some cases the rivet holes were filled by welding, and patch plates were also added. The tank has been in service more than a year and a half and no more leaks have been discovered."

Mr. Price described several additional welding jobs in the Mid-Continent where the electric arc method was used in the construction and repair of large storage tanks. He also gave a number of advantages to be derived from this method of welding.

SUPPLY STORE AT OKEMAH

The Hinderliter Tool Co., of Tulsa, has established a store and field plant at Okemah, Okla., to take care of the rapidly growing trade in that district.

NEW MAN-COOLER FAN ANNOUNCED ON MARKET

Workers in steel mills, foundries, tube mills, drop forge shops and other places where the heat is intensive will be interested in a new, high efficiency, man-cooler fan just developed by the Buffalo Forge Co., of Buffalo, N. Y. This unit is made in two sizes, the larger having a 36-inch diameter fan wheel while the smaller has a 30-inch wheel. The entire fan is of heavy construction to insure against vibration; the screen enclosing the fan wheel is extra heavy, while the rim itself is made of 2¼x2¼-inch angle. The unit, however, can be moved easily from place to place.

This type man-cooler consists of but three essential parts—the fan wheel, a direct-connected motor and the pedestal. The wheel is composed of 10 blades so designed that the air is delivered in a concentrated solid stream. This factor of air delivery is important in order that the best cooling efficiencies at the lowest expenditure of power may be had. A direct connected motor placed directly back of the fan wheel supplies the motive power. The 36-inch man cooler fan is supplied with a 5-h. p. motor, while the smaller fan is equipped with a 3-h. p. unit. The speed for both fans is 900 r. p. m. The pedestal is a heavy casting; four bosses are provided in the base for foundation bolts in case the unit is maintained in a permanent location.

In addition to the concentration of air obtained with this new man cooler unit, the carrying power effected is very great. It is claimed that men supplied with the cooling blast receive actual physical benefits which enable them to perform more work in the same time and decreases labor turnover. The motors furnished are large enough for continuous operation under most severe conditions.

LEAFLET DESCRIBES TRACTOR AND WINCH

The Advance-Rumely Thresher Co., of Laporte, Ind., describes the tractor winch, and the 16-30 oil pull tractor, both made by this concern, in an attractive leaflet, which is now being sent out to the trade. Fred S. Cook, of Perry, Okla., is the factory representative in the oil fields of Oklahoma and Kansas. It is said to be especially adapted for pulling rods, tubing and casing from practically any depth of oil well with the minimum amount of time and extra equipment and labor.

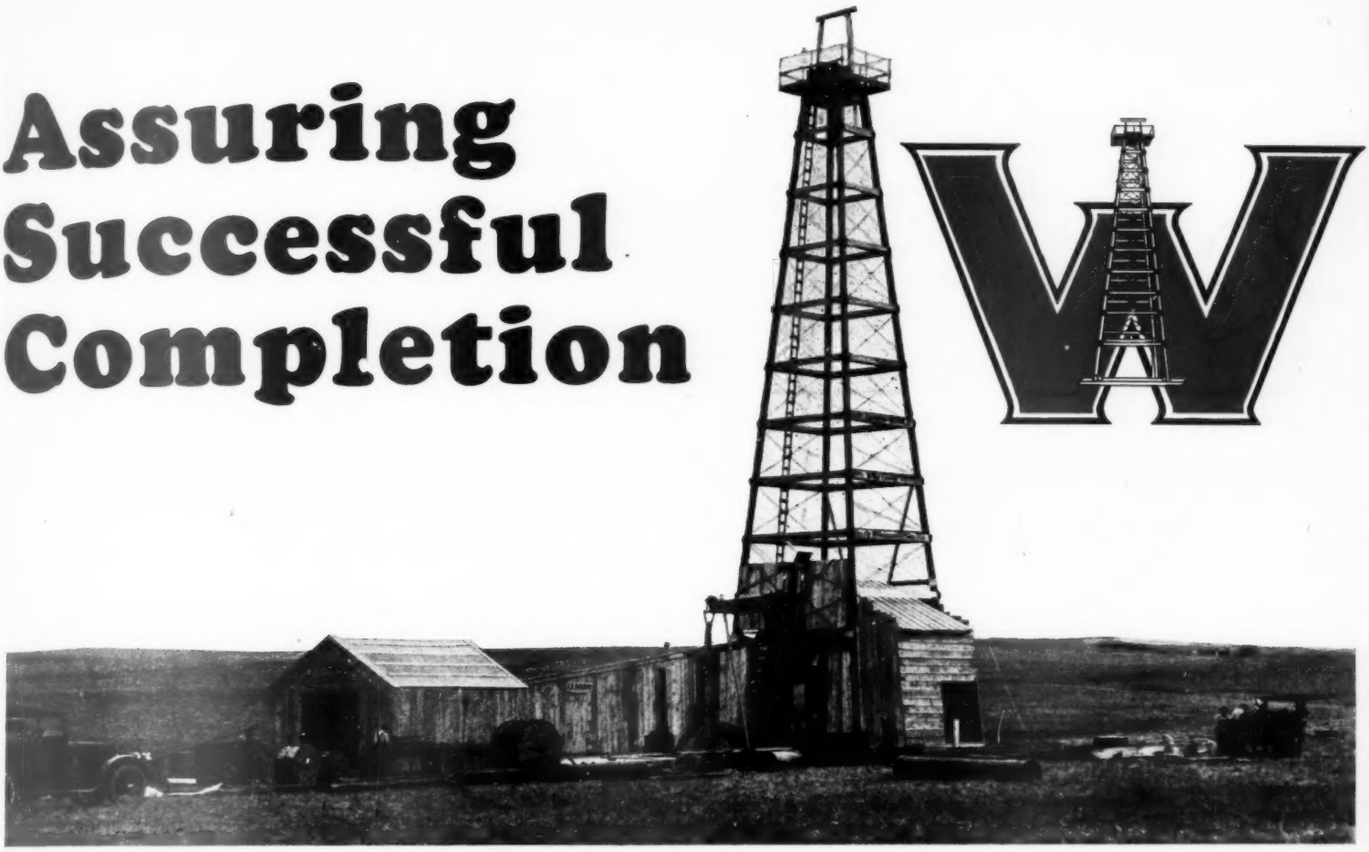
The winch has a maximum pull of 7,550 pounds, and will handle rods for any depth of well and tubing for wells up to a maximum depth of 2,000 feet with a single line, eliminating the necessity for auxiliary blocks or drums. The winch also is equipped with a power reverse of high speed. When connected to the engine the line has a reverse speed of 360 feet per minute. Lowering loads are always under control.

The large power developed by this winch is attributed to the exceptionally large reserve power in the 16-30 Oilpull tractor. The motor develops 25 per cent reserve power on the belt. The power is transmitted directly to the hoisting drum with only two reductions through roller chains, giving a heavy pull on the line and enabling high speed.

ORDERS FOR COILED TANK CARS

The Standard Tank Car Co. has been awarded the contract for building seven 12,500-gallon coiled tank cars for the Ford Motor Co., Detroit, Mich., and has also received an order from the Carnegie Steel Co. for the building of 20 12,500-gallon coiled tank cars.

Assuring Successful Completion



The Wertzberger Derrick shown above was erected at the site of the test well of A. A. Rollstone on the Virgil Ullom Farm, 3 miles southwest of Calhan, Colorado.

A strong derrick, one capable of pulling long heavy strings of pipe and one that will stand the jar and vibration of drilling was necessary.

The Wertzberger derrick was selected because of its advanced design, generous provision for strain, freedom from vibration, elasticity and resiliency of wooden legs, and lastly, the many safety features that have been built into it to provide against accidents.

It has been accepted by operating companies as being a finished derrick, one for any job imaginable.

Wertzberger Standard Derrick—20 feet base, 82 feet high.
Wertzberger Rotary Derrick—24 feet base, 123 feet high.

Write today for Information

Wertzberger Derrick Co. Tulsa, Okla.

TRANSIT PUMPS

The small difference between the price of a TRANSIT PUMP and a cheaper pump is a mighty good investment.

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Our engineers are always available to the oil trade to help in the solution of their pumping problems.

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NATIONAL TRANSIT
PUMP & MACHINE CO.
Oil City, Pa.

District Offices: New York Philadelphia Pittsburgh Cleveland Tulsa Houston Denver

LOSSES FROM OVERPRODUCTION LESSEN EXPORTS

(Continued from Page 85)

Trinidad, India, Persia and the Dutch East Indies. Shipments to these countries consisted of gasoline, kerosene and lubricating oils, exported in cases. Incidentally, the Dutch-Shell combine is a producer and strong competitor to American oil companies in Venezuela, Trinidad, Dutch East Indies and India, while it is well known that the Anglo-Persian Oil Co. has practical control of the oil industry of Persia, as far as production is concerned. Nevertheless, this apparently did not prevent the exportation of 188,900 cases of kerosene to that country from New York recently, together with 2,000 cases of gasoline.

The exportation of petroleum products from New York to oil producing countries emphasizes the fact that the United States is still dominant in the oil industry throughout the world. American oil exporters have built up foreign trade for 50 years, and it will undoubtedly be difficult to break this ascendancy despite the development of production abroad.

New York's Recent Shipments

The principal oil exports from New York Harbor during the last four weeks are typical of what this trade amounts to. Shipments included the following:

Gasoline: Bulk, 12,231,344 gallons; cases, 695,444.

Kerosene: Bulk, 11,364,868 gallons; cases, 1,050,266; barrels, 2,384.

Fuel oil: Bulk, 881,264 gallons.

Gas oil: Bulk, 3,409,157 gallons.

Lubricating oil: Bulk, 1,914,648 gallons; 67,163 barrels; cases, 96,735.

Lubricating greases: 6,841 barrels; 1,137 cases.

Paraffin wax: in bags, 2,123,440 pounds; barrels, 5,107.

Petroleum asphalt: 1,800 barrels.

Crude oil, 7,818 barrels.

From this list it can be seen that the New York oil export trade consists largely of cased gasoline and kerosene, of lubricating oils in barrels and of paraffin wax. The cases and barrels used in this trade are practically all made in factories adjoining the refineries and operated by the refining companies.

Four companies handle the bulk of this trade. They are the Standard Oil Co. of New Jersey, Standard Oil Co. of New York, Vacuum Oil Co. and Tide Water Oil Co., all of which have refineries on New York Harbor.

Tankers vs. Cargo Vessels

Bulk oil exports can naturally be handled only in oil tank steamers, particularly constructed for the purpose. However, the bulk export trade from New York is a comparatively small part of the total exports. Most of the oil exports from New York are carried in general cargo vessels. The oil companies as a rule make yearly contracts with shipping lines for the handling of case and barrel shipments, which are largely to South America, the Near East and the Far East. It can be estimated that about three-quarters of the oil exports from New York are carried in general cargo vessels not owned by oil companies.

Case shipments are naturally in smaller lots than bulk shipments. It would be ideal if all exports could be made in bulk, but consumption in many countries is not large enough. Furthermore, oil can be marketed in many countries only in cases. Inasmuch as it is more economical to manufacture the cases at the refineries, the oil is cased in this country and shipped in that manner.

The fact that oil must be marketed in cases in many countries makes it more expensive than if it could be shipped in bulk. Often the case adds 3 cents to 6 cents per gallon to the cost. Added to import duties and other charges which must be included in the cost of oil to inhabitants of most countries, it can be seen why foreigners pay much more for oil than the inhabitants of the United States. As exports to Europe are almost wholly in bulk, consumers there have an advantage over those in South America, the Far East and other more remote parts of the world.

In countries like Europe, oil is shipped in bulk to bulk distributing stations, from which it can be distributed further in tank cars or tank wagons. In most countries of the Far East, Near East and South America, it is transported from the coast to the interior in cases or barrels on the backs of mules and other pack animals. There are few railroads, and the roads in many sections are often nothing more than ragged trails.

PIPE LINE EXTENSIONS FIRST SIX MONTHS 1924

(Continued from Page 85)

beginning at its El Dorado station and following along the old main line to Shreveport.

The Texas Pipe Line Co. has laid an 8-inch line, beginning at the center of Section 28-15-15, Ouachita County, thence east to Section 26-15-16, thence southeast to Section 36-15-16, Ouachita County. An 8-inch line has been laid from the southwest corner of Section 5-16-15, Union County, running northwest to the center of Section 36-15-16, Ouachita County. Also a 6-inch line from the center of Section 18-16-15, Union County, to The Texas Co. Hegwood lease, southeast Section 24-16-15.

The Crusader Pipe Line Co. is now laying a 6-inch line from the old Arkansas Pipe Line & Nav. Co. loading rack on the C. R. I. & P Railroad in the northwest corner of section 31-16-14 to Section 24-16-16. The Crusader Pipe Line Co. only recently entered this field and is reported to have purchased the Arkansas Pipe Line & Nav. Co. holdings (Union County).

Henry H. Cross Co. has a 4-inch line from its lease in the southeast corner of Section 13-16-16, Union County, to the refinery on the Missouri Pacific Railroad, Section 1-16-15.

The Gulf Refining Co. of Louisiana is laying an 8-inch main line from its tank farm in Section 30-17-15, Union County, southwest to the tank farm at Dubberly, La., Section 3-18-9. Approximately 15 miles of line has been laid to date, leaving about 45 miles to go.

McMillan Fehlman & Oliver are laying a 4-inch line from their loading rack, Section 28-16-15 to Section 24-16-16.

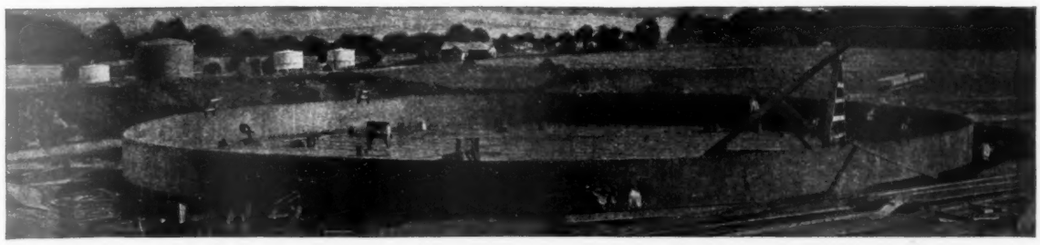
The Houston Oil Co. of Texas has laid a 6-inch line from Smackover to Camden, Ark.

North Central Texas

The Lone Star Gas Co. has built a natural gas line from a point 12 miles west of Judd, in Palo Pinto County, to Ranger, in Eastland County. The line is approximately 52 miles in length and 12, 16 and 18-inch pipe was used. Connecting with this line north of Ranger, another line 31 miles in length is being constructed and will be completed in July to the Ibex Pool in Shackelford County. This line will run principally the residue gas from the Landreth gasoline plant and 20 miles of 16-inch and 11 miles of 12-inch will be used in the construction. These lines were all the major pipe lines that were built in the south section of the field during the first six months of 1924.

The Prairie Pipe Line Co. extended its line from Red River station at Burkburnett to Block 14 in the Wilson Pool in Archer County, approximately 40 miles. About half of this line is 6-inch and the balance 4-inch. The Prairie also constructed a 3-inch line from the South Electra Field, connecting with the main line about two miles east of Iowa Park, which is the main line to Oklahoma.

The Wichita Pipe Line Co. built a 6-inch line from the refineries in the vicinity of Wichita Falls and Iowa Park to the Wilson Pool in Archer County. This line also connects with the Freeman-Hampton and Shappell Pools. It is now running around 2,000 bbls. of crude daily. Construction has been started on a 4-inch line by the Wichita Pipe Line Co. from its 6-inch line at the Wilson



Erection view of 55,000-barrel Biggs Tank at Yale, Okla., completed recently well within specified time limit. Completed tank shown below.

Biggs Service Means Real Money To Buyers of Biggs Products

TO order storage tanks or other equipment is one thing,—to get them when you want them, ready for business, is something else. And to be sure that they are built right, so that they can be depended upon to stay tight and give continued satisfaction—that is equally if not more important.

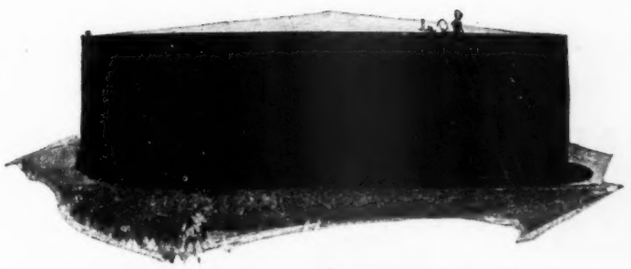
We can give you positive assurance on these vital points. When you need equipment and want it *right* and *on time,* it will be to your interest to let Biggs know.

Will you give us a chance to prove that Biggs is just the source of supply you need for 55's, 80's and general refinery equipment by letting us figure on your next order?

THE BIGGS BOILER WORKS COMPANY
Buchtel and Bank Streets
Akron, 35, Ohio

Biggs Products for Field Storage and Refinery Equipment

Storage tanks of 55,000 and 80,000 barrels capacity
Fractionating Towers or Columns
Dephlegmating Towers
Pressure Stills for Cracking Process
Steam Stills, Heat Exchangers
Crude Stills, Condenser Boxes
Agitators, Run Down Tanks
Crude Storage Blending Tanks
High Pressure and Accumulator Tanks
Direct Heat Driers



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Maloney Tanks are made in sizes from 12 barrels up. 12 and 17 barrel Maloney Tanks are shown above.

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MALONEY TANK MFG. Co.
OFFICES AND PLANT: TULSA, OKLA.

12 to 3,000 Barreis, Inclusive

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Prompt, Dependable Export Service

MALONEY
TALONE

Pool to the Swastika Pool. Lateral lines will be laid covering the Swastika Pool. With the completion of this line the Wichita pipe line will run in the neighborhood of 5,000 or 6,000 bbls a day.

The Gulf Pipe Line Co. laid a 4-inch line 12 miles in length from the South Electra main line to the producing leases in the Wilmot Pool.

The Texhoma Oil & Refining Co. recently completed a 4-inch line from the Swastika Pool to the main line at the Wilson Pool. This line is not a common carrier line. With the completion of the Wichita Pipe Line Co.'s line to the Swastika Pool that pool will have two 4-inch lines. The Wichita Pipe Line Co.'s line will be a common carrier line.

The Texas Pipe Line Co. has abandoned its crude line from Desdemona to Ranger, which was built during the boom days to handle the large initial production in the Desdemona Field. It was approximately 20 miles in length.

Panhandle Territory

A common carrier line has just been completed by the Plains Pipe Line Co. 25 miles in length, constructed of 4-inch line, from the Burnett producing pool in Carson County to the town of Panhandle. From there the oil is shipped by tank cars to the Reese S. Allen refinery at Amarillo. This is the first main crude carrying pipe line to be built in the plains country of Texas.

Under construction at this time is a 6-inch oil carrying line from Amarillo to the Burnett Pool. The line will be owned and operated by Dorset Carter and others. This line should be in operation within 90 days and will be approximately 60 miles in length.

In northwestern New Mexico work is progressing rapidly on the 22-mile 3-inch pipe line being laid by the Midwest Refining Co. from the Hogback Dome to Farmington. An office building and loading racks are being constructed at Farmington and the pipe is being stretched along the route. It will be a welded line and the construction of buildings and equipment, including a booster station, appears to be of a permanent character.

In the Rocky Mountains

The main trunk pipe lines were completed by the first of 1924 and only a few small lines were laid or started during the first half of the year. The pipe for the big gas line from the Buffalo Basin Field in the Big Horn Basin that is to supply the Greybull refineries with gas is stored at Worland and Kirby until the Midwest Refining Co. starts work. It is not expected that this line will be laid this year. This line will be 14-inch plain end and 75 miles long.

The Producers & Refiners Corp. is now laying a 4-inch gas line from the Baxter Basin to the city of Rock Springs to supply that point with gas and the same company laid a line from the Eight Mile Lake Field in Carbon County, a distance of 12 miles, to the Parco refinery for fuel. This is a 6-inch line screw pipe.

The Prairie Pipe Line Co. is laying a 4-inch screw pipe line from the Moffat Field in Colorado to the railroad at Craig, a distance of 16 miles, and the Midwest Refining Co. is laying a pipe line from the Hogback Field in New Mexico to a rail point, a distance of 24 miles. This is a 3-inch screw pipe.

The Ohio Oil Co. is considering laying a pipe line from the Baxter Basin Field in Wyoming to Salt Lake City, Utah, and has completed a survey for same, but has not started work.

Central West Work

But little extension of pipe lines or construction of new lines is reported from the Central West Fields during the first half of 1924. In northwestern Ohio George Lacknett and others put in several miles of gas line from the Coldwater gas field, in Butler Township, Mercer County, to Celina, which is a 6-inch, to furnish gas to Celina.

The Buckeye Pipe Line Co. put in a 4-mile line connecting the new Payne field, in Pauling County, Ohio, to a newly constructed loading rack at that place. This is practically a gathering line. The same company is reported to be connecting the new Cynthian township, Shelby County Field by laying several miles of line. Same company is working on a connection between the Coldwater Field of Mercer County, which will run to Celina, the number of miles not reported. It is expected to be a 4-inch line.

Numerous gathering lines were put in throughout the Lima Field, hooking new wells close to the main gathering lines.

In eastern Kentucky the Petroleum Purchasing Co., since buying the lines of the Indian Refining Co. in Powell, Estill and Lee Counties, has made a few extensions to its large holdings of the Petroleum Exploration Co., in the Lee-Powell-Estill County Fields. This company has also erected a loading rack at Idamay, in Lee County, and laid about 3 miles of line, all 4-inch, from the field.

During the past six months very few connections were made by any of the purchasing agencies. The Paragon Development Co. laid an 8-mile line, consisting of 2-inch and 3-inch, to connect with the producing wells at Judio Creek in Cumberland County. The same concern laid 5 miles of 2-inch line to connect the new Emery-Moore Pool in Barron County with its main line running from Cumberland County to Barren County.

The only extension made by the Indian Pipe Line Co. was to connect the Hurricane and Herbert schoolhouse districts, extensions of the Pellville Pool, in the Owensboro district, to its main line at Owensboro. Extensions were also made by the Indian and Paragon companies to connect with new producing leases in the McLemore-Gillespie-Price Pool in southwestern Warren County.

Eastern Additions

There were no new pipe lines or extensions in southwestern Pennsylvania, West Virginia or southeastern Ohio during the first half of the year. In Ritchie and Calhoun Counties the Hope Natural Gas Co. doubled for a short distance one of its gas lines. Unless new fields are discovered the pipe lines are now adequate to take care of the oil and gas of the present and future. The pipe line companies are giving more attention to repairing the old lines than building new. This is true in particular of the very old fields, where the lines have rusted out and have to be replaced with new.

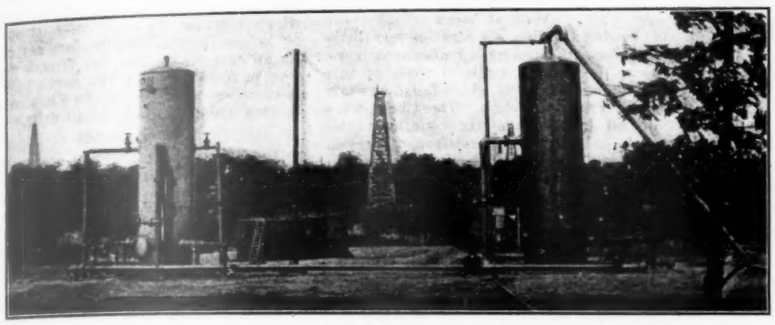
OIL IN NEW ZEALAND

While petroleum in commercial quantities has yet to be discovered in Australia, New Zealand has already produced an appreciable quantity. The Kotuku oil district was discovered in 1867, but attracted little attention until 1900. Since that time a good deal of prospecting has taken place, much of it a desultory character. About 1913 was the period of greatest activity in prospecting. With one exception, the results were unproductive, but a good flowing well was obtained at a depth of 2,300 feet during 1913. The flow of oil from this well is said to have ceased through the collapse of the casing. Although the undertaking was not a financial success, no serious effort has since been made to open this well or to drill others in the locality. It is possible, the somewhat peculiar nature of the oil is partly responsible.

OIL-ELECTRIC LOCOMOTIVE

Railroad men believe the new oil-electric locomotive has solved the problem of complete electrification of railroads and that the innovation may revolutionize rail transportation, says the New York Evening Post. Electrification of railroads has been limited by the availability of cheap hydroelectric current, compared with costly electric generating stations operated by coal, and by the need of spending huge sums to maintain third-rail or trolley systems. Transportation experts point out that the new engine could make a continuous trip across the continent, a virtually impossible feat for the present steam locomotive, which, because of its manner of fueling, must be overhauled frequently to maintain efficiency. The new locomotive is operated at one-seventh the cost of a steam engine.

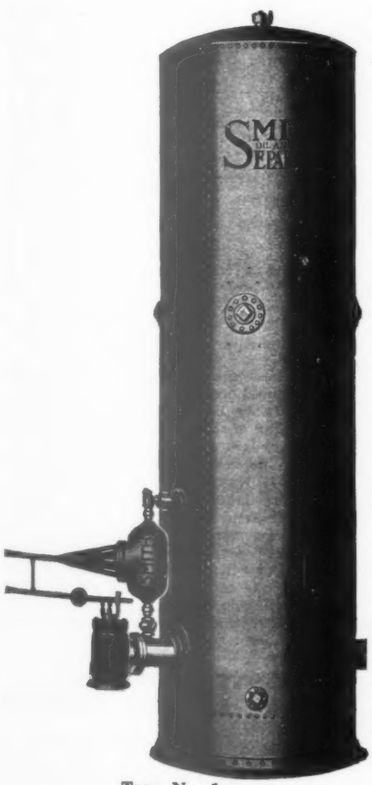
Efficiency With Long Life



SMITH OIL AND GAS SEPARATOR

The two Smith Oil and Gas Separators shown above are installed on the Jenkins Lease of the Mid-Kansas Oil and Gas Company in Sec. 15, Twp. 10, Rge. 8.

Both Separators are Type No. 1. The one on the right is an old model having been in use many years, and at the present time is handling the production of No. 1 and No. 2 wells. During its entire lifetime it has performed admirably separating the gas from the oil in the highest degree of efficiency.



Type No. 1

The Separator on the left is the latest model of Type No. 1.

Many improvements have been made in the mechanical design of the Smith Oil and Gas Separator, always keeping in mind that the primary object was to thoroughly separate the gas and oil.

Cases such as this bear out this point.

The Smith Separator is made in the following sizes:

Type 1—Capacity 5000 bbls. oil, 10 million cu ft. gas.

Type 2—Capacity 2000 bbls. oil, 5 million cu. ft. gas.

Type 3—Capacity 500 bbls. oil, 1 million cu. ft gas.

Type No. 3

The Smith Separator Co.

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plunger

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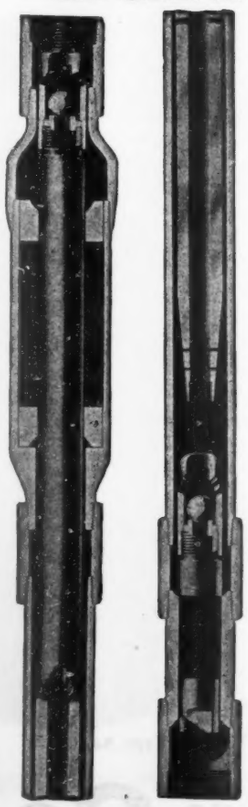

Try a "Tex" under your most difficult conditions.

We know that you will be well pleased with the "Tex" after a fair trial and you will then standardize on it. You will use no other.

There are seven principal reasons for the excellence of the "Tex" and for its preference, namely:

1—It pumps floating sand.
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3—It will not cut oil.
4—Packs itself.
5—Lowers operating expenses.
6—Increases production.
7—Reduces rod pulling to the very minimum.

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Bradford, Penna.
Branch Factory and Warehouse,
Tulsa, Okla.

WESTERN KENTUCKY SLOWER FIRST HALF

(Continued from Page 80)

throughout on gravity and conforming to the gravity scales of the major purchasing agencies of the Mid-Continent Field, which, together with an uncertain market, slowed down development work.

Wildcat Work

During the first six months very little was done in opening up advanced territory, there being really 8 wells of this nature drilled, all of which failed to show commercial production. These tests were drilled in the following counties: one each in McLean, Henderson, Grayson, Marion, Todd and Owen, and two in Hardin, one of which was carried to a depth of 1,400 feet below the shale.

Returning to the work in detail, Barren County came to the fore with 93 completions, an increase of 44 over the first six months of 1923, and nearly doubled its flush production. The Emery-Moore Pool, 2 miles west of Glasgow, brought about the present activity in this country, and at this time there are more wells drilling than ever before at any one time. So far this pool has showed 114 completions, 104 of which made producers. This pool developed a new sand at an approximate depth of 550 feet, 185 feet below the shale. The wells come in making from 2 to 30 bbls. and hold their initial production in good shape. Oil in this area tests from 44 to 46 gravity and commands the Somerset Light price.

The most important event of the first half of the year was the deepening of No. 1 Bud Kerr, in the Kettle Creek district of Cumberland and Monroe Counties. This well started off at better than 1,500 bbls. daily from a sand found below the Pencil Cave formation at an approximate depth of about 550 feet. Although this well was flowing through two 2-inch lead lines, the pressure was so great that wells on the adjoining Logan farm, producing from the Sunnybrook sand, began to flow; the Sunnybrook formation, in the Kerr, not being cased off. No. 1 Kerr was 1,800 feet from No. 6, the well in which the Cave sand was first found, and indicates that this newly discovered pay underlies a great portion of the Kettle Creek Field. At this time there are four wells producing in this pay at Kettle Creek and a number of them are being drilled deeper in search of it.

A fact of importance is that four distinct pay sands have been found on Kettle Creek, the Stray, First and Second Sunnybrooks, a stray between, and the cave sand.

A number of other good producers were brought in in Cumberland County at Bear Creek, Sulphur Creek, Galloway Creek and Judio Creek, most of which are producing from the sand below the Pencil Cave. A number of wells which were abandoned when no production was found in the Sunnybrook sands, have been drilled through the cave and have made good producers.

Owensboro District

The Owensboro district, comprising Hancock, Ohio and Daviess Counties, has seen steady development for the past six months. The main feature of this district is that production is found in a true sand stone which has a thickness of from 10 to 60 feet. The shallow sand, the Jett, is found from 450 to 490 feet; the Barlow from 715 to 780 feet. The Jackson sand, lying between the Jett and Barlow, has shown nothing but gas so far, but there are hopes of discovering oil in large quantities somewhere in the field, as this sand is always found in every well drilled in the district.

There are now 88 wells connected to pipe line in the Owensboro district, with an average daily production of a little better than 4 bbls. to the well, according to May runs. Wells are completed at a cost of from $2,500 to $3,500, and at this time $1.55 is being paid for the oil which tests below 32.9.

The known boundaries of the Pellville Pool have been extended to the southeast and southwest, to the Hurricane and Herbert School House districts, from 3 to 5 miles.

The only important feature for Allen County was the opening of the Kerby Pool, southwest of Scottsville, lying between the Keen and Mitchell Pools. This pool is very narrow and very short in length. Wells came in making from 5 to 150 bbls. from the shallow depth of around 235 feet, immediately below the shale. The district resembles the Keen Pool as quite a bit of salt water is found which must be, in most cases, pumped off before the well will produce any oil. As an example, on the Guy farm, a well was pumped for over two weeks before it came on oil, at which time it started flowing about 500 bbls. of oil daily.

Warren County

The only district that has any appreciable play in Warren County the past six months is the McLemore-Gillespie-Price Pool, southwest of Bowling Green. The new wells in this area have focused the attention of operators and at present it is the most active spot in the field.

The pool is undoubtedly a part of the big Davenport structure running through western Warren County, but is looked upon as a separate pool because the producing sand is peculiar to this limited section. Production is found in a second pay below the usual Davenport pay, and is much more siliceous and shows a larger percentage of sand that the usual pay found in the field.

So far, 31 wells have been drilled within an area of 1½ miles in length and a quarter to a half mile in width, all of which have made commercial producers.

Warren County shows 111 completions for the time in review, 86 of which made producers with an initial yield of 1,887 bbls. Compared with the figures of the first half of 1923, this shows a loss of 131 completions, 77 producers and 2,169 bbls. in production.

The completed wells in the Western Kentucky Field for the first six months of 1924 were distributed by counties as follows:

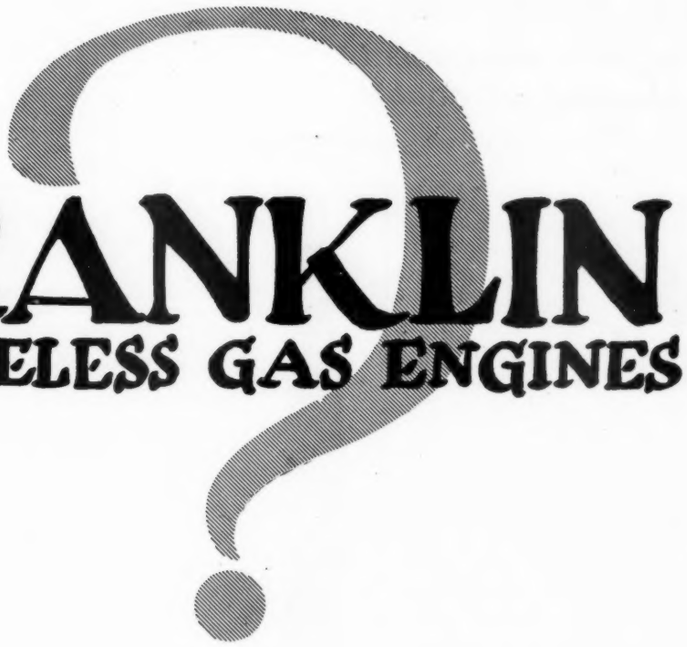
County—	Comp.	Prod.	Dry	Gas
Allen	121	2,061	46	0
Warren	111	1,887	25	0
Barren	93	685	16	1
Cumberland-Monroe	73	3,139	49	0
Owensboro district	45	509	7	1
S'mpson	10	172	4	0
McLean	1	0	1	0
Hopkins	4	115	1	0
Metcalf	5	11	1	1
Henderson	1	0	1	0
Hard'n	2	0	2	0
Grayson	1	0	1	0
Marion	1	0	1	0
Todd	1	0	1	0
Owen	1	0	1	0
Taylor	1	0	0	1
Green	2	0	1	1
Total first half 1924..	479	8,560	158	7
Total first half 1923..	738	11,746	217	5
Difference	259	3,186	59	1

Gloomy Outlook

The recent cuts in the price of crude produced in all sections of the Western Kentucky Field has already affected the drilling of a number of wells which were planned in the earlier part of the year and the next six months in this district will be very quiet. However, Allen, Barren, Cumberland, Monroe and the shallower sand districts of Warren County will get more or less play due to the low cost of development. Very little wildcatting will be done in any section of the field due to the fact that the purchasing agencies do not care to build any extensions to their lines in this period of depression.

OPERATION OF DIESEL ENGINES DESCRIBED

The operation of Nordberg Diesel engines is described in detail in a booklet issued recently by the Nordberg Manufacturing Co., of Milwaukee, Wis. Some gigantic types used in marines and stationary work are described. One particularly large engine is a 2,200 boiler horse power Nordberg-Carels two-cycle Diesel engine of four cylinders, 120 R. P. M., which was direct connected to an alternating current generator and was used in power plant work. Others are used in pipe line work, irrigation work and power development. The booklet is filled with illustrations, charts, tables and descriptive matter concerning the many types of Diesel engines manufactured by this concern.



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Actual Records that Prove the Wisdom of Adding the DEVIL'S STEEL HAND and DEVIL'S PITCHFORK *to your regular equipment beyond shadow of doubt!*

When a sudden fishing job confronts you, as it may do any day, there is nothing that will give such genuine relief as the thought that the most consistently successful of all fishing tools is on hand to help you. We don't ask you to think of the Devil's Steel Hand and Devil's Pitchfork as the best just because we say so. We merely present **facts**—the actual records which follow—and let you draw your own conclusions.

At one of the White Oil Corp. wells a packer and 120 ft. of tubing were lost in the hole. Then the head of a tubing spear wedged itself between packer and casing and broke off. For two months ordinary tools were tried without success. Then the Devil's Steel Hand arrived on the scene. In short order the well was clean.

F. W. Fusselman of Claremore, Okla., lost an entire string of tools. He tried other tools for 8 days—without avail. Then he got Cleve Johnson, our Tulsa manager, to take the job on a guarantee basis. A Devil's Steel Hand cleaned the hole in 14 hours.

R. W. Young, Pan-American Petroleum Co., spent a number of weeks and several thousand dollars trying to fish out a slip that had dropped in the hole. He wired for a Devil's Steel Hand. They got the slip on the fourth run.

Fishing tools that make records like these should be part of your regular equipment. They may save weeks of labor and thousands of dollars when the next fishing job comes up. Write for prices and further details.

Devil's Pitchfork

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111

NEW YORK AND NORTHWEST PENNA. LESS ACTIVE THAN LAST YEAR

By D. S. Wakenight

The first six months of the current year proved the most unsatisfactory of any like period in the history of the development of the eastern fields. Looking back over the development month by month fails to reveal any new discoveries calling for special mention. Nearly all of the wells completed are located in defined territory and conducive of scarcely anything better than light pumpers, dry holes and gas wells. For the first four months of the year, weather conditions were unfavorable for active field work. Continuous rains kept the roads in very bad condition all through March and April so that it was next to impossible to get drilling material to locations.

Early in the year, the market for crude of the Pennsylvania grade began to advance, after starting at $3 a barrel on January 1. On January 10 it was advanced to $3.25 again on the 25th of the same month to $3.75 and on the 30th to $4. By this time operators began to cast about for likely places to drill but weather conditions were still unfavorable. By the first of May there was considerable new work started, but on May 10 the market dropped to $3.75 and by June 14 was down to $3.25, causing another halt in development work. All other eastern grades were reduced proportionately and once more the fields were in a state of lethargy. The combined new production of the three southwestern divisions amounted to but 4,030 barrels.

Compared with the previous six months this shows a loss of 227 in completions and 1,775 barrels in new production. Operators were unable to increase their production or even prevent it from showing a decline. The wells completed were so light that the new production could not make up for the loss in the old wells.

Few Good Producers

At long intervals a good producer was completed in the deep sand territory in southeastern Ohio, located in defined limits, and West Virginia had a very few good ones but the southwest Pennsylvania fields completed nothing but light pumpers and fewer of any kind than for a like period since operations began. When the once great southwest fields of Pennsylvania, Ohio and West Virginia complete but 82 wells in six months it can readily be understood how operations have dwindled. In the heyday of the old McDonald Field, more than 30 years ago, hundreds of wells were completed each month in the southwest fields and the daily production of the McDonald Field at its peak reached more than 87,000 barrels a day, or considerably more than the present daily production of all eastern high grade fields.

Almost No Wildcatting

During the first six months of the year there was very little wildcatting in any section. For one thing, the market did not justify taking the chances which is a hazardous business at best, and the territory was not available to give assurance of getting a producer. During the period under review there was not a well completed outside of defined territory that seemed to point the way to new producing territory. In Morgan County, Ohio, there was a little new Berea grit pool discovered and is now under development. The wells average about 40 barrels, initial production. It will not be possible to carry the producing limits far in any direction before encountering territory that was fully developed years ago. In the deep sand territory there are possibilities in Holmes County, but at no time was the market high enough to warrant an aggressive search for new production.

Will Drill in Trenton Rock

A new discovery was made near Newark, Licking County, Ohio, a few weeks ago when a well was drilled to the Trenton Rock and resulted in a fair producer, a strictly new departure in that part of the State. Whether the initial well is a freak or the forerunner of a Trenton Rock Pool remains to be determined. In the vicinity of the first well three have been started for the Trenton Rock and another in Hanover Township. These, when completed, should be fair tests for Newark and Franklin Townships.

It is expensive drilling to the Trenton Rock, the depth more than 4,400 feet, and if a pool is discovered it will not be speedily developed and then only by companies with large capital.

West Virginia Had Few Tests

The lower West Virginia counties had a few tests completed but none found oil in commercial quantities. At some future time a new pool may be discovered in one or more of these counties, despite the failures that have been encountered. At the present time the Pure Oil Co. holds undeveloped acreage in Sherman district, Boone County, that can furnish some wells of better than the average size. However, the Pure Oil Co. did very little development work during the first half of the year. The market was so low that it did not warrant drilling as the cost to complete a well to the Berea grit in that section is above $20.000.

No deep tests were completed in West Virginia. Near Terra Alta, Portland district, Preston County, the Hope Natural Gas Co. started what is to be a deep test on the Joseph Gordon farm. At the close of June it had reached a depth of 3,100 feet and delayed with a crooked hole. Much trouble had been experienced from this cause almost from the time they started to drill. If possible the Hope Company proposes to put this well down deeper than any other ever drilled.

Up on Chestnut Ridge, of the Allegheny Mountains, near Liginore, Westmoreland County, the Peoples Natural Gas Co. is still pegging away at its deep tests on the Seger Brothers, and a second test on the Booth Flinn property. The first named had on June 30 reached a depth of 6,878 feet and the last named was down to 6,832 feet. At the depths named neither had found oil or gas. The money expended in drilling these two wells runs up into six figures. From many causes, fishing jobs and caves have been encountered and caused delays. The Peoples Natural Gas Co. has been more than three years continuously at the test on the Seger Brothers' farm. Gas, rather than oil has been the incentive for drilling these two wells.

By George Turnbull

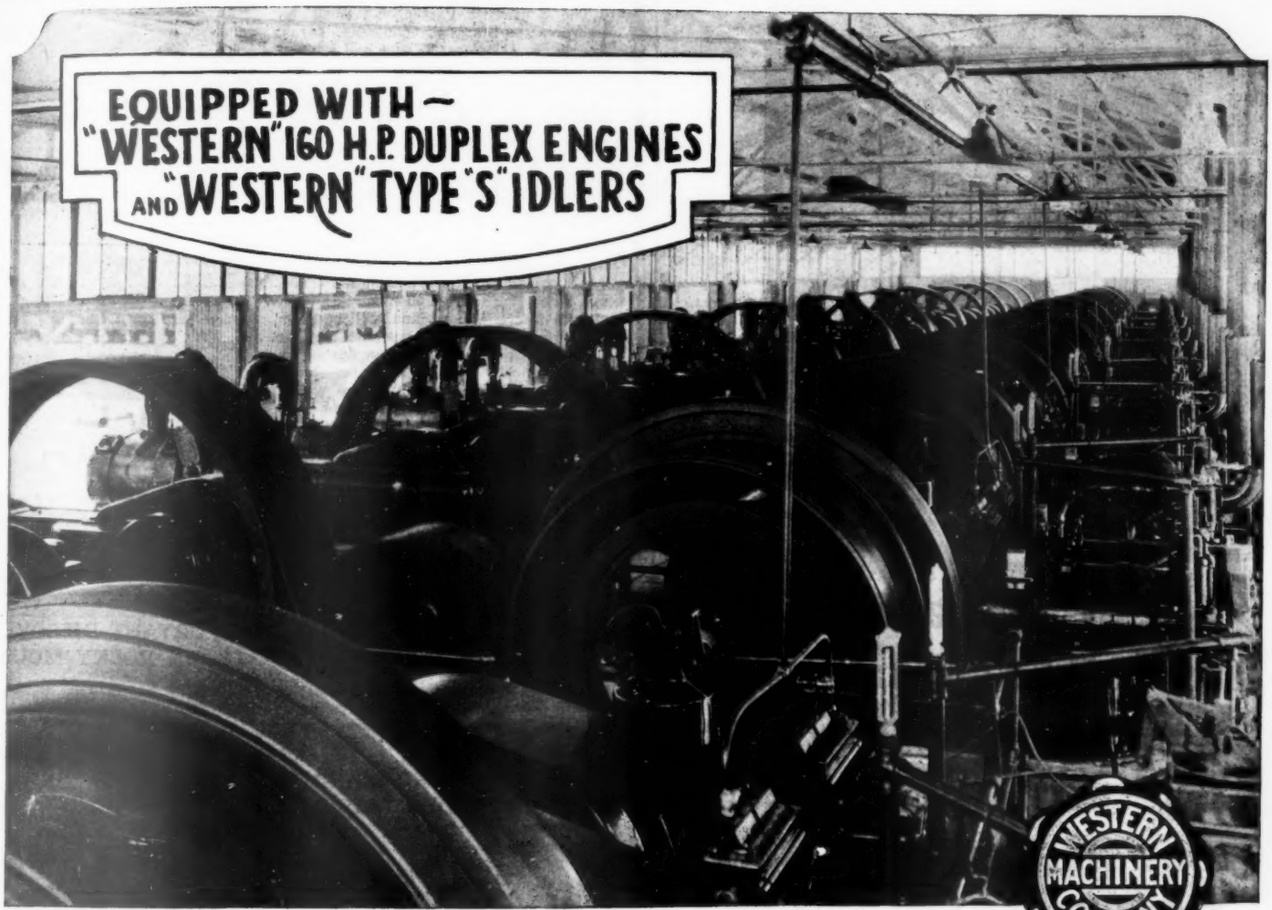
A large decrease, both in completions and in new production, was recorded during the first six months of this year in New York and northwestern Pennsylvania, compared with the corresponding period of 1923. This was due to the fact that the Tidioute Field a year ago was still turning out some good producers while now there is practically no work under way there and the few wells that are completed are but small producers.

The Bradford Field was the most active spot in the northwestern area of the Eastern Field in the first half of this year. In the period 435 wells were completed, or 28 more than in the same period last year, but only 416 were oil wells or 9 more than last year. The phenomenal percentage of oil wells drilled in the Bradford Field for so many years was marred this year by 18 dry holes. Bradford's dry hole percentage has always been very low. In the first half of 1923 only 1 dry hole out of 407 completions was recorded. The field is being drilled intensively for "flood" production and it is expected that the dry hole column will stand out more prominently in the future.

During the first six months of this year there were 885 completions in the

(Continued on Page 106)

THE GAS ENGINE COMPRESSOR PLANT



Costs No More And Yet Provides For Greater Flexibility and Gas Displacement

Engines: Two cylinder, four cycle, 200 R.P.M. 14¼"x24" —mean low full and lubricating oil consumption.

Idlers: 36"x24", phosphor bronze bearings, mounted in steel frame—mean minimum floor space and no slippage between engine and compressor.

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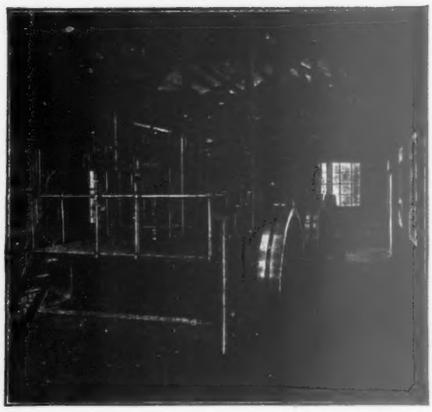
HOPE Built



A combination of low installation and operating costsandgoodperformance, is the reason for the second installation within a year of duplicate 160 H. P. Reeves gas engine compressor units by a large eastern gas company.

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Consulting and Contracting Engineers in Natural Gas and Oil

Reduced Railroad Fare for Visitors to Petroleum Exposition

The Southwest Passenger Association has made announcement of the special railroad rates that it intends to grant to visitors going to Tulsa during the International Petroleum Exposition and Congress, October 2 to 11, according to Harold W. Roe, of Cosden & Co., vice chairman of the transportation committee of the exposition.

The Southwest Passenger Association embraces the States of Oklahoma, Texas, Louisiana, Arkansas, Kansas and Missouri. All point in Oklahoma will be given a special reduction to fare and one-third for the round trip, the minimum round trip fare, however, to be $1. Likewise, points in Missouri, Kansas and Arkansas, from which the one way fare to Tulsa is $10 or less, and in Texas, from which it is $11.05 or less, will be allowed a rate of fare and one-third for the round trip. These tickets will be sold October 5, 6, 7, 8, and 10, the final return date being October 13.

All points in Missouri, Kansas, Texas, and Arkansas, not included in the above, and the State of Louisiana, will be given the rate of fare and one-half for the round trip. This will be conducted on the certificate plan which is almost always used in connection with a widely scattered railroad reduction, and was found to be very successful when used at the exposition last year. By this, the purchaser pays the full round trip rates when be buys his ticket, and is given a certificate, which when presented at the Tulsa office, entitles him to a rebate of half the cost of a one-way ticket. This will be done in Tulsa at the central exposition office, from which the assignment for rooms and hotel accommodations are also issued.

Tickets under the second plan may be purchased from October 4 to 8, inclusive, the ticket being good until October 13, with validating dates October 6 to 11.

Mr. Roe has given assurance that his committee will arrange for rates quite as liberal with the other passenger associations of the country.

TEXAS CO. NEVER BOUGHT CRUDE UNDER ITS PRICE

Referring to an address made by William H. Gray, president of the National Association of Independent Oil Producers, Robert A. John, general attorney of The Texas Co., in a letter to Mr. Gray states that The Texas Co. has not in Texas, or any other place, purchased storage oil, or oil on credit balances with it, or, for that matter, oil from anyone anywhere at other than posted price, which, in the instance referred to by Mr. Gray was higher than the Magnolia Petroleum Co.'s price. The letter follows:

"In your address of July 7, delivered at Fort Worth, before the Petroleum Division of the Fort Worth Chamber of Commerce, you are quoted in The Oil and Gas Journal of July 10, 1924, as follows:

> "'It was with equal regret that I learned that The Texas Co., after putting on a storage order in certain areas, has offered to purchase this oil at prices based on the Magnolia schedule.'

"I do not know who was your informant and, of course, I concede that both he and yourself made this statement in perfect good faith, but it is absolutely incorrect. We have purchased no oil, either in storage or otherwise, anywhere in Texas or any place else except at our posted price, which was the higher price as compared with the Magnolia. This being our uniform and unbroken record, I take this occasion to write you personally requesting that you correct the same in The Oil and Gas Journal, which I am sure you will take pleasure in doing, so I know both from your past and from the very nature of your criticism in the article, that you do not want to do us an injustice, and to permit the matter to remain uncorrected might be of considerable injury to us in the opinion of our customers."

CENTRAL WEST SHOWS DECLINE IN RESULTS

(Continued from Page 72)

Warren	111	1,887	25	0
Barren	93	685	16	1
Simpson	10	172	4	0
Cumberland	71	2,630	43	0
Monroe	7	500	6	0
Owensboro	45	500	7	1
Metcalf	5	11	1	0
Clinton	3	0	3	0
McLean	1	0	1	0
Hopkins	4	115	1	0
Owsley	16	100	0	11
Henderson	1	0	1	0
Grayson	1	0	1	0
Elliott	11	100	1	0
Hardin	2	0	2	0
Knott	2	0	0	2
Floyd	3	18	0	1
Marion	1	0	1	0
Todd	1	0	1	0
Owen	1	0	1	0
Taylor	1	0	1	0
Greene	3	0	1	1
Boyd	1	5	0	0
Total	701	12,899	176	31

TENNESSEE
Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	2	0	2	0
February	2	0	2	0
March	4	10	3	0
April	3	5	2	0
May	1	100	0	0
June	0	0	0	0
Total	12	115	9	0
First half 1923	18	114	12	1
Total	12	115	9	0

Completions by Districts

County—	Comp.	Prod.	Dry	Gas
Clay	8	115	5	0
Warren	2	0	2	0
Davidson	1	0	1	0
Cheatham	1	0	1	0
Total	12	115	9	...

MISSISSIPPI
Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	1	0	1	0
February	1	0	1	0
Total	2	0	2	0
First half 1923	9	0	8	1
Difference	7	0	6	1

Completions by Districts

County—	Comp.	Prod.	Dry	Gas
Pike	2	0	2	0

IMPORTANT DISCOVERIES IN ROCKY MOUNTAINS

(Continued from Page 80)

Total 6 mo., 1923	156	40,245	12	0
Difference	82	17,215	0	5

Completions by Month

Month—	Comp.	Prod.	Dry	Gas
January	30	7,970	0	0
February	30	4,192	6	0
March	30	7,595	2	0
April	37	11,989	4	1
May	57	15,711	0	1
June	54	10 003	1	3
Total 6 mo., 1924	238	57,460	13	5
Same period 1923	156	40,245	12	0

MONTANA
Summary of Completed Work by Districts First Six Months of 1924

District—	Comp.	Prod.	Dry	Gas
Cat Creek	6	1,150	1	0
Kevin-Sunburst	35	4,370	13	0
Miscellaneous	12	3,000	9	1
Total 6 mo., 1924	53	8,520	23	1
Same period 1923	78	6,670	19	0
Difference	25	1,850	4	1

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	10	315	3	0
February	9	376	4	0
March	2	35	1	0
April	4	250	1	1
May	12	6,960	2	1
June	16	585	6	1
Total 6 mo., 1924	53	8,520	23	1
Same period 1923	78	6,670	19	0

UTAH

Month—	Comp.	Prod.	Dry	Gas
May	1	....	1	0
Total 6 mo., 1924	1	....	1	0
Same period 1923	1	....	0	1
Difference	0	....	1	1

NEW MEXICO

Month—	Comp.	Prod.	Dry	Gas
May	2	1,047	0	0
June	3	600	0	0
Total 6 mo., 1924	5	1,647	0	0
Same period 1923	5	....	0	0
Difference	5	1,647	0	0

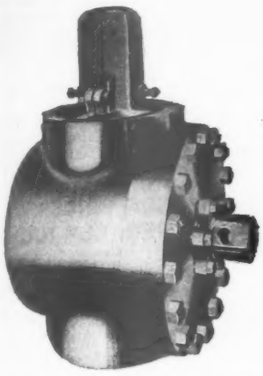
COLORADO

	Comp.	Prod.	Dry	Gas
Moffat County (March)	1	4,280	0	0

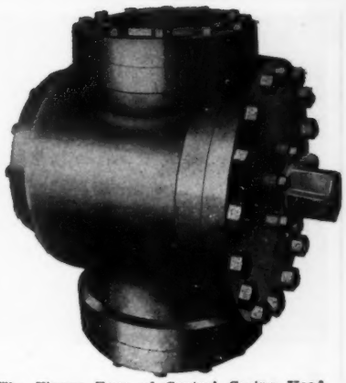
Completions by Months in All Rocky Mountain Fields

Month—	Comp.	Prod.	Dry	Gas
January	40	8,285	3	0
February	39	4,567	10	0
March	33	11,910	3	0
April	41	12,239	5	3
May	72	23,715	9	4
June	73	11,188	8	4
Total	298	71,907	37	11
Total 1st half 1923	235	46,915	21	10
Difference	63	24,992	6	10

Standard Equipment



The Roller Oil Saver in the Control Casing Head (Straight Type) (Patented.)



The Flange Type of Control Casing Head. (Patented.)

The Roller Oil Saver. (Patented.)

The Roller Oil Saver in the Tee Casing Head. (Berry Type.) (Patented.)

The Roller Oil Saver in the Common Casing Head. (Berry Type.) (Patented.)

The control Casing Heads, Common and Tee Casing Heads and the Roller Oil Saver are more than ordinary oil field devices. They are the embodiment of Conservation as well as Standard Equipment.

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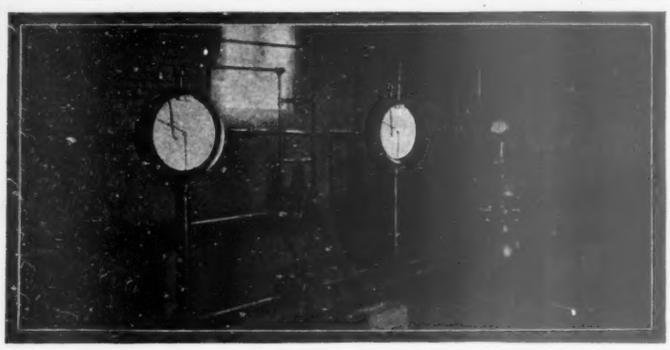

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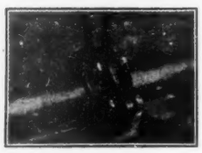

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THE COMPASS OF INDUSTRY

6969

MUCH WORK BUT POOR RESULTS IN MEXICO

(Continued from Page 71)

barrels the day maximum. It is continuing on into the Jardin with its drilling on this southeast line structure. Everything else completed south of the Tuxpam River during the time in question was a failure, Mexican Eagle Oil Co. abandoning operations altogether at Palma Sola, the most southerly point in the district being west of Furbero.

Tierra Blanca and Cerro Azul had some good wells to their respective credits, as well as a few failures. Toteco yielded the usual per centage of strippers, while some failures and a few small strippers resulted in the Amatlan. Deep tests drilling west of the old defined productive areas are not hopeful, and one test in the Laguna de Tamiahua and one near Port Lobos to the east were both dry holes.

Isthhmus of Tehuantepec

In south Mexico, in the Isthmus of Tehuantepec, a subsidiary of the Mexican Seaboard Oil Co. finished two tests, Nos 1 and 2 San Carlos, no great distance from Mexican Eagle Oil Co.'s refinery at Minititlan. One of these wells will set perforated casing at 2,016 feet to see what production it will make, and No. 2 is considered as having a 250-bbls. showing at 2,213 feet. This is a salt dome country similar to Spindle top. Sand gives considerable trouble. Mexican Eagle Oil Co. is drilling one test down there now, No. 9 Filisola, and when it is completed it will have to its credit a total of 220 wells drilled at various places in this southern country, most of them having been economical failures. This is also true of nine tests drilled in Caimba, in the State of Chiapas a number of years ago, despite good showings in some of the holes. Mexican Seaboard's subsidiaries there, however, have big holdings well checkerboarded all over the extensive areas, and it is going to push an active exploration campaign. The rainy season down there now has practically suspended everything until the rains stop and the country has an opportunity to drain. As the rainfall during the rainy season averages some 150 inches, the fact that the country is "afloat" during that time can easily be imagined.

Vessel Shipments

Vessel shipments from Mexican ports of primary clearance during the six months just passed totaled 70,862,743 bbls., an increase over the same period in 1923 of 1,292,993 bbls. Reduced to a table the shipments follow:

From—	
Tampico	66,183,866
Port Lobos	2,783,667
Tuxpam	1,895,210
Total 6 mos., 1924	70,862,743
Total 6 mos., 1923	69,569,750
Increase 6 mos., 1924	1,292,993

Two classes of oils in the movement above noted were: Crudes, 43,266,459; topped crudes, 22,000,009; distillates, 2,029,180; bunkers (to balance), 3,567,095.

The division of movement for the per

The division of movement for the period was as follows:

To—	
United States	48,931,940
United Kingdom	4,483,529
Cuba and West Indies	3,962,052
South America	3,339,083
Continent	2,890,595
Mexican coastwise	1,773,371
Canada	760,719
Panama	466,341
Central America	321,162
Azores	208,579
Mediterranean ports	158,277
Bunkers (to balance)	3,567,095
Total	70,862,743

The heavier gravity production of the northern fields in the above movement totaled 47,646,365 barrels, an increase over the same period in 1923 of 16,695,356 bbls.

Present Production

To revert to the wells completed as producers in the first half of the current year, it is useless to set down the initial production of these wells. Salt water invasions in many of them render such figures of no value. Suffice it that in the last week in June daily production from all wells in the different producing areas was substantially as follows: Panuco-Topila, 258,640; South Fields, 115,000; Ebano, 14,000. The latter pool can produce more oil than the volume indicated here as being actually run.

In sum, giving Ebano its head, Mexico can produce at this writing say 400,000 barrels the day, or 12,000,000 bbls the month.

TANK WAGON PRICES GENERALLY HIGHER

(Continued from Page 66)

months' period. Lower crude prices have also materialized since June 30 and with the major marketing interests this is more important in determining tank wagon changes than the spot refinery price on gasoline established by the refining and jobbing interests of the industry. These lower tank wagon prices should develop within the next few weeks. What happens the latter three months of the year will depend on general conditions within the oil industry. If the crude and refinery prices do not improve, still lower tank wagon prices will develop. If conditions improve past experience shows that it will be reflected in firm or advancing gasoline tank wagon prices.

Following is a table giving the tank wagon prices without the road tax as effective January 1 with all the price changes up to June 30. Prices as of January 1 and June 30 for 1923 are also given as are the road taxes both for the two years.

NEW YORK AND N. W. PA. ARE LESS ACTIVE IN 1924

(Continued from Page 102)

territory covered by this review, which is a decrease of 211, compared with the figures for the first six months of 1923. New production amounted to 1,810 bbls., a decrease of 1,582 bbls. Dry holes aggregated 54, a decrease of 24. Gas wells totaled 38, a falling off of 9.

EASTERN FIELDS

Summary of Field Operations, First Half of 1924

Completions by Districts

Field—	Comp.	Prod.	Dry	Gas
Allegany	117	262	3	6
Bradford	435	1,019	18	1
Middle Field	38	98	6	4
Venango-Clarion	221	287	15	21
Butler-Armstrong	74	144	15	12
Southwest Pennsylvania	89	140	16	43
West Virginia	524	1,383	111	273
Southeastern Ohio	395	2,607	103	53
Total first half 1924	1,893	5,940	285	411
Total first half 1923	2,328	9,720	367	381
Difference	435	3,780	82	30

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	259	576	45	79
February	223	501	40	42
March	282	730	41	76
April	364	1,415	53	76
May	368	1,248	53	64
June	397	1,470	53	74
Total	1,893	5,940	285	411

OIL BUILDS STATE UNIVERSITY

Louisiana, which ranks next to the bottom among States of the Union in literacy, is soon to have a new university—equal to any in the country in scholarship standards. The grounds are laid out for the accommodation of 3,000 students and the undertaking will cost about this year slightly less than half that $7,000,000. When the university is opened this year slightly less than half that amount will have been spent. The school, when finished, will not have cost the taxpayers one cent directly and scarcely anything indirectly. It is being built from a tax of 2 per cent on oil, gas and other natural resources taken from the soil of the State.

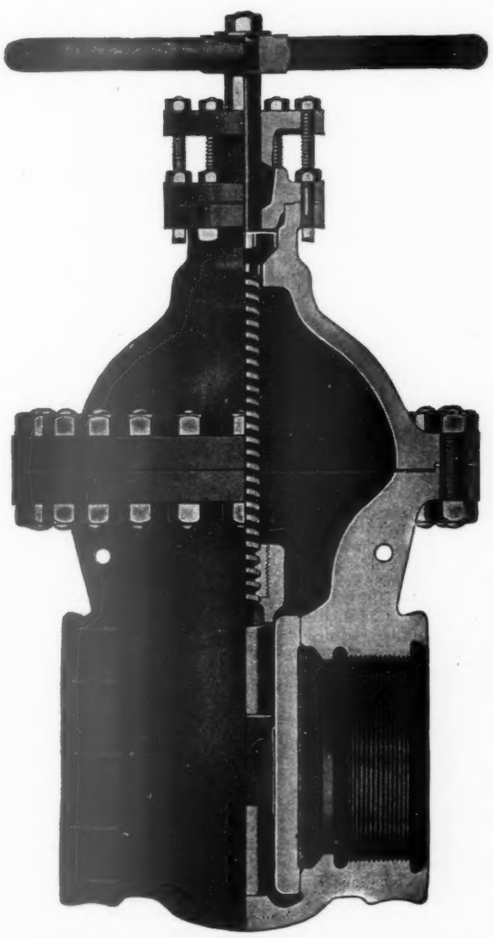
WATCHORN GASOLINE PLANT

Watchorn Oil & Gas Co. expects to have its natural gasoline plant in the Watchorn Field completed and in operation September 1. The company expects to make 10,000 and 12,000 gallons a day in this plant, as the gas runs four gallons to 1,000 feet.

Chapman

Cast Steel Drilling Valves

2500 Pounds—24 Hour Kerosene Test



Chapman List 108 cast steel drilling gate, made in all sizes, both screw and flange end

Chapman Cast Steel Drilling Gates are made of Chapman Electric Steel.

Note construction—a spherical cap with circular flange of ample thickness to provide greatest possible strength.

Spindles of special, heat-treated steel, with integral, self-packing collar.

Gates and seats ground to a mirror-like surface, and overlapped to produce tightest contact possible; all edges bevelled to protect this surface.

Positive wedging action.

All bolts of special, heat-treated steel, producing tightest joint possible.

Both in both screw and flange end.

Tested with kerosene at 2500 lbs. for a period of twenty-four (24) hours.

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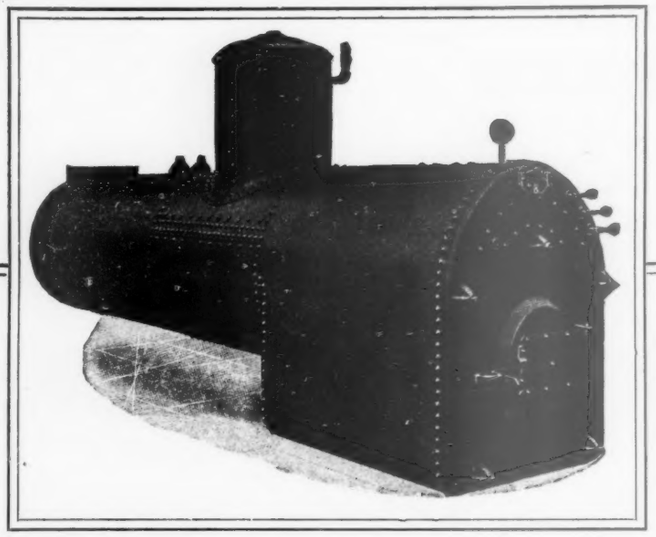

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Then you note the construction of F&Ts, their tightness, their roominess and their convenience. You consider that 60 years' experience is back of them, and you begin to understand the remarkable reputation that F&Ts have built up wherever oil is produced.

F&Ts give full horsepower rating when and where wanted. A model for every oil country need, all built to conform to the laws of the state in which they operate.

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POWELL CAME BACK; RICHLAND LOOMS UP

(Continued from Page 76)

242 completions, or 128 more than in the first half of 1923; the initial production was 131,273 bbls., or 63,548 bbls in excess of the same period last year. One hundred and one dry holes and abandoned tests were reported in 17 counties outside of Navarro, or 41 more than in the first six months of the previous year.

Production 26,274,257 Bbls.

The production of East Central Texas, comprising the Powell, Currie and Richland Fields in Navarro County and the Mexia Field in Limestone County for the first half of 1924 aggregated 26,-274,257 bbls. In the first six months of 1923 the same district produced 11,-614,576 bbls.

The Powell Field led this year with a total of 19,491,526 bbls, as compared with 475,329 bbls in the first half of 1923. Mexia was second with 5,930,562 bbls., as compared with 10,122,267 bbls. in the first half of last year. Currie produced 627,239 bbls the first half of this year and 1,026,980 bbls in the same period last year. The Richland district, a new field, the production of which was not segregated until June of this year, was credited in that month with a production of 129,330 bbls.

The Mexia Field was opened in 1921 and was followed soon after by the opening of the Currie Pool northeast of it. These two districts in 1921 produced 5,732,016 bbls and in 1922 35,-347,217 bbls. In 1923 the two fields named produced 18,147,654 bbls and in the first half of 1924 their combined output was 6,557,801 bbls. Since their beginning Mexia and Currie up to June 30, 1924, produced 67,533,492 bbls. of crude. At the close of June there were 510 wells in the Mexia Field and 68 in the Currie Pool. The wells in Mexia in June averaged 56.31 bbls. a day in production and those in Currie 48.43 bbls each.

Powell's Great Record

The wonderful Powell Field has produced altogether 50,089,350 bbls. up to June 30, 1924. As the field was not fairly opened until late in May of last year its production with the exception of 30,000 bbls. from January to May, inclusive, and 445,329 bbls. in June 1923, has all been in the one year's time from July, 1923, to June, 1924, inclusive, and in that time it produced 49,614,021 bbls. of crude. It will be recalled that the Powell Field came in at a time when California's big production was assuming dangerous proportions and while California in itself would have been sufficient to demoralize the 1923-24 petroleum market situation, Powell acted as the last straw that broke the camel's back and its nearly 50,000,000 bbls. of crude produced in the past year, while it enriched the operating companies fortunate enough to develop it, helped in the collapse of the crude market structure and the consequent loss of real money to operators owning tens of thousands of old wells of small production.

Powell was supposed to be due for a great fall in 1924. Its average daily production in November, 1923, was 275,-960 bbls. and it fell in December to 95,-411 bbls. It came back in January to 95,713 bbls. a day and mounted to 125,-747 bbls. in March of this year, dropping to 117,157 bbls. in April; 103,106 bbls. in May and back to 93,491 bbls. in June, its lowest mark since July, 1923 It is permanently on the decline now, as when this was written in the latter days of July the production was crowding the 82,000-bbl. mark. There were 726 producing wells in the field in June and their average daily output in that month was 128.78 bbls. per well.

Richland a Coming Field

The Richland Field was not sufficiently prominent to segregate it until June, when it averaged 4,311 bbls a day. It will undoubtedly be heard from in the last half of this year, as its production at this time has passed the 15,000-bbl. mark from 38 wells, an average of about 395 bbls. per well per day. At the close of June there were 27 producing wells in the field and they averaged for that month 159.67 bbls. per day per well.

EAST CENTRAL TEXAS
Summary of Completed Work for First Six Months of 1924
Completions by Districts

County—		Comp.	Prod.	Dry	Gas
Navarro		185	131,273	44	2
Miscellaneous		57	0	57	0
Total		242	131,273	101	2

Note—Dry and abandoned tests were reported from the following counties: Bowie 1, Hopkins, Rains, Freestone, Henderson, Hunt, Smith, Titus, Williamson, Wood, Limestone, Milam, Kaufman, Dallas, Falls, McLennan and Robertson Counties

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	48	11,573	7	1
February	44	4,982	36	1
March	23	61,622	4	0
April	47	28,270	33	0
May	55	20,566	19	0
June	27	4,260	13	0
Total	242	131,273	101	2
Total first 6 months.	114	67,725	59	1
Difference	128	63,548	41	1

QUIET HALF YEAR IN NORTH-CENTRAL TEXAS

(Continued from Page 76)

most of the producing pools in the county. During the last six months of 1923 there were a total of 397 tests completed in the county as against 703 for the first six months of 1924, a difference of 306. The flush production for the last six months of 1923 was 30,646 bbls. in comparison of 79,978 for the first six months of 1924, a difference of 49,332 bbls. These figures show that the initial production per well averaged over the 12 months' time about the same amount per well.

Mitchell County

Mitchell County is pursuing the even tenor of its way with the Sloan and others and the California Co., Ltd., doing about all the development work that is being done in that territory. Its production is averaging around 1,500 bbls. a day from about 20 producers. Not many wildcat tests are drilling, what work is being done is on semi-proven leases or acreage close to producing properties.

The Panhandle Field

The Panhandle territory is not as much of a mystery as it had been for the past two years but what it will eventually prove to be is problematical. The Texas Co. is the largest producer at present in the field. Its No. 1 Burnett, which was drilled some two years ago and was controlled for several months was released, cleaned out and agitated with the completion of a 55,000-bbl. storage tank. The well responded with a flow of around 750 bbls. a day of a heavy congealed oil, which was run to the tank and stored. A pipe line has just been completed to the town of Panhandle, 18 miles distant, and runs will be made to a loading rack at that place. The new pipe line was built by operators interested in the development of the field outside of The Texas Co. Other companies producing in the field are Silk and others, the Gulf Production Co. Several other companies are drilling or have made locations for tests on lately acquired leases.

The wildcat districts are slowing up in their activities in keeping with the general conditions of the industry. Several tests are drilling in Baylor County, so far without showing production. To the west, the Plains country is being prospected in a safe and sane manner but nothing of a sensational nature has so far been developed.

At the closing of this review an important discovery is semi-officially reported from Gray County, near the town of Pampa, in the Panhandle district. The Wilcox Oil Co., headquarters at Tulsa, Okla., drilling its No. 1 test on a block of 5,000 acres out of the Worley and Reynolds ranch drilled 8 feet into a pay formation with a total depth of 2,985 feet, at that depth it is reported that oil shot over the crown block, the test made two flows and settled down with several hundred feet of oil in the hole. The oil is reported as a heavy, congealed product, similar to the production obtained in Carson and Hutchinson Counties. The test is located around 25 miles southeast of the Carson County producers, it was

(Continued on Page 112)

"Day and Night Service"

Republic Supply Stores are located at convenient points throughout the Mid-Continent and Coast fields, ready to fill your needs AT ANY HOUR OF THE DAY OR NIGHT, with oil field equipment of the kind that has built a reputation for efficiency; such as:

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes Special Milling Cutters.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

Jones' Acme Sucker Rods. **Jones' Acme Gas Engines.**

District Headquarters and Stores Located at

HOUSTON, TEXAS
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SHREVEPORT, LA.
El Dorado, Ark.
Smackover, Ark.

WICHITA FALLS, TEXAS
Graham, Texas
Breckenridge, Texas
Electra, Texas
Burkburnett, Texas
Wilson, Okla.
Duncan, Okla.

TULSA, OKLAHOMA
Tonkawa, Okla.
Henryetta, Okla.
Yale, Okla.
Shidler, Okla.
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Republic Supply Co.

Quick Service and Protection Against Substitution of Wire Lines in Every Important Field

Our Warehouse at Mildred, Texas

Left to right: E. A. McKenzie, our manager at Mildred, Texas; Fred Gibson, Pure Oil Co.'s warehouseman at Mildred; S. L. Parker, our warehouseman at Mildred, Texas.

Right near you you'll find a large stock of

WILLIAMSPORT
Telfax
WIRE Tape Marked LINES

and in every field you'll find plenty of men who KNOW from experience the superior value of Williamsport Lines.

They are the only make that provides positive proof of each grade—a protection that is worth more than the price of the Line.

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Blackwell	Okmulgee	Shreveport	Wichita Falls

WILLIAMSPORTT
Service In Every Important Field

KANSAS PRODUCTION IN FIRST SIX MONTHS 13,768,262 BBLS.

The production of crude oil in Kansas in the first half of 1924 aggregated 13,768,262 bbls. of 2,093,909 bbls. less than in the same period last year when the production came to 15,862,171 bbls.

At the close of the half year there were 18,097 producing oil wells with an average daily output for June of 82,444 bbls. or 4.56 bbls. per well per day. Wells in Marion County averaged 20.32 bbls. daily; Butler County, 8.53 bbls. a day: Greenwood-Woodson Counties 19.90 bbls. per day and in all other counties combined, 1.36 bbls. per day. Kansas Field averaged all the way from 155.25 bbls. per day per well down to 40-100 of 1 bbls. per day in Wilson County, one of the oldest fields.

The famous Towanda Field, which yielded one well in 1917 that produced nearly 20,000 bbls. a day and a lot of wells which did better than 8,000 bbls. in their initial stage, is down to an average of 8.04 bbls. per day per well. The Gypsy Oil Co.'s famous No. 6 Shumway, in Section 11-26-4, was in this field. The well produced over 2,000,000 bbls. before it quit. Thus do the big fields fall off and find their way into comparatively inconsequential districts.

The Greenwood County Fields, of which there are more than half a dozen, made the best record of improvement during the half year. In January this district produced a total of 626,014 bbls. in a 31-day month, while in June the same pools produced 885,810 bbls. in a 30-day period.

The largest producing pool in the six months was the El Dorado Field in Butler County which yielded a total of 1,232,039 bbls. The Virgil Pool, in Greenwood County produced 1,126,325 bbls. and the Seely Pool in the same county, 1,001,068 bbls. No other pools produced 1,000,000 bbls. in the six months.

Cowley County had a notable increase, its January showing of 67,673 bbls. having increased in June to 126,570 bbls. Wilcox sand production in Montgomery County caused a considerable increase in that old field in the course of the half year. Russell County which produced 3,565 bbls. in January had an output of 18,630 bbls. in June and this could have been greatly increased had the wells there been operated every day. In the opening of the second half of the year Cowley County is showing signs of developing a pool of some importance in Township 33-3. Russell County promises to show an increase in production over the first half, while all eyes are turned on Rice County, where one completed well was good enough to warrant several other tests which had not been completed up to this writing.

No other fields in the State promise anything sensational in the last half of the year.

NEW ARKANSAS STATION

LITTLE ROCK, Ark., July 26.—The Waite Phillips Co. is to add another filling station to its list in Arkansas. It recently purchased the John P. Boyle property in Little Rock at a cost of $17,500 and has made plans for erection of a station.

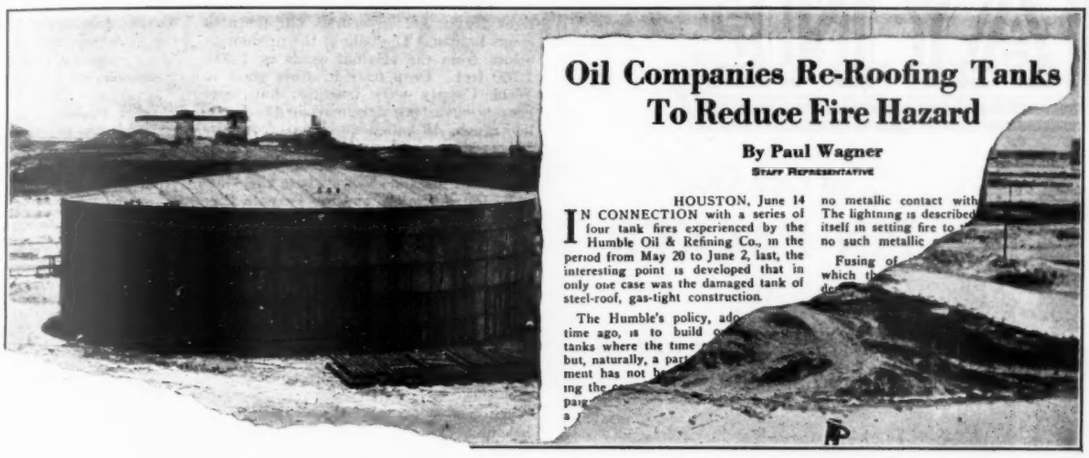
KANSAS
Daily Average Production of All Fields for June

	No. Wells	Daily Prod. Bbls.	Aver. Prod. per Well Bbls.
Marion County:			
Florence-Urschel	118	2,257	19.13
Peabody	157	3,627	23.11
Covert-Sellers	73	1,188	16.27
Total	348	7,072	20.32
Butler County:			
Elbing	147	3,911	26.61
Potwin	58	477	8.22
South Augusta	395	2,274	6.37
North Augusta	224	1,340	5.94
Cameron-Robinson	99	676	6.75
Wilson-Dunkle	163	2,212	13.57
Towanda	450	3,620	8.04
El Dorado	1,158	6,738	5.82
Nuttle-Koogler	96	1,790	18.84
Sluss	69	475	6.88
Blankenship	112	1,196	10.70
Douglas	35	150	4.30
Smock	27	227	8.41
Leon-Weaver	54	930	17.22
Fox-Bush	376	3,308	8.74
Total	3,462	29,527	8.53
Greenwood Woodson Counties:			
Sallyards	143	1,290	8.72
Teeter-Pixley	75	1,510	20.13
Seely	161	5,712	35.48
Thrall-Burkett	148	9,046	61.12
Polhamus	98	4,335	44.23
Virgil	612	6,227	10.14
Miscellaneous	177	139	.79
Total	1,420	28,259	19.90
Other Counties:			
Cowley	100	4,242	424.20
Harvey	5	94	18.80
*Russell	4	621	155.25
Rice	1	77	77.00
Chautauqua	2,745	2,488	.91
Elk	345	1,104	3.19
Montgomery	2,949	2,800	.95
Wilson	502	221	.44
Neosho	1,481	847	.57
Allen	1,445	1,167	.81
Anderson	421	1,848	4.39
Miami	1,285	633	.49
Franklin	552	676	.75
Bourbon	121	373	.80
Linn	514	426	.83
Labette	87	54	.62
Lyon	9	52	5.78
Total	12,867	17,586	1.36
Total Kansas	18,097	82,444	4.55

*Wells idle part of the time. Potential production considerably greater than here given.

PRODUCTION OF KANSAS BY POOL OR DISTRICT AND BY MONTH FOR THE FIRST SIX MONTHS OF 1924

	January Bbls.	February Bbls.	March Bbls.	April Bbls.	May Bbls.	June Bbls.	Total 6 Mos. Bbls.
Florence	69,378	63,856	68,324	69,540	69,378	67,710	406,186
Peabody	116,498	99,934	110,701	113,070	116,591	108,810	666,604
Covert-Sellers	31,713	29,029	22,351	29,940	37,882	35,640	186,555
Elbing	128,688	132,414	124,496	123,600	132,525	117,330	758,963
Potwin	16,988	17,139	17,763	17,310	19,313	14,310	102,823
Cameron-Robinson	24,025	22,186	24,521	24,450	24,366	20,280	139,827
Wilson-Dunkle	74,648	67,425	67,115	66,600	66,991	66,360	409,139
Towanda	111,383	103,588	106,051	104,070	115,041	108,600	648,736
Eldorado	209,746	198,708	198,431	208,680	214,334	202,140	1,232,039
Fox-Bush	126,387	121,481	132,928	117,810	128,030	99,240	725,876
Nuttle-Koogler	54,529	67,744	51,709	51,900	55,056	53,700	334,638
Sluss	15,128	13,920	15,996	15,300	16,213	14,250	90,807
Blankenship	45,167	45,269	44,981	39,330	41,509	35,940	252,196
North Augusta	41,540	35,960	39,711	37,650	39,959	40,200	235,020
South Augusta	72,757	63,916	66,650	69,720	69,533	74,250	416,826
Smock	6,820	6,177	7,626	7,590	8,928	6,810	43,951
Douglas	6,262	4,930	6,169	5,880	5,466	4,500	33,197
Leon-Weaver	38,502	35,322	35,650	33,810	24,131	27,900	205,315
Virgil	208,010	176,233	192,820	172,110	190,340	186,810	1,126,323
Seeley	169,446	158,282	161,324	163,770	176,886	171,360	1,001,068
Thrall-Burkett	113,460	104,690	120,249	145,980	222,518	271,380	978,277
Sallyards	48,608	46,129	49,693	51,300	56,265	38,700	290,705
Polhamus	41,322	73,863	92,287	118,260	119,846	130,050	575,629
Teeter	41,137	33,031	29,791	33,810	32,860	45,300	215,929
Miscellaneous	4,030	4,118	4,340	4,200	4,960	4,170	25,818
Russell County	3,565	4,930	5,983	8,940	8,587	18,630	50,635
Cowley County	67,673	60,175	66,464	86,580	114,460	126,570	551,922
Harvey County	4,650	12,180	3,348	2,790	2,820	2,820	28,608
Chautauqua County	81,840	76,444	81,496	78,300	79,918	74,670	472,668
Elk County	16,182	15,254	16,058	15,840	16,492	33,120	112,946
Wilson County	7,719	7,250	7,688	7,320	7,533	6,630	44,140
Allen County	31,496	28,971	30,721	29,490	30,411	35,010	186,099
Neosho County	25,761	24,099	25,699	24,930	25,854	25,410	151,753
Lyon County	1,829	1,682	1,860	1,920	1,984	1,560	10,835
Miami County	19,313	18,125	19,251	18,300	18,910	18,990	112,889
Franklin County	20,677	19,227	20,563	19,410	19,995	19,140	118,997
Bourbon County	3,812	3,596	3,720	3,600	3,720	11,190	29,639
Linn County	12,214	11,339	12,121	11,640	11,687	12,780	71,781
Anderson County	48,360	45,414	49,910	49,080	50,561	55,440	298,765
Labette County	1,767	1,653	1,767	2,790	2,821	1,620	12,418
Montgomery County	60,946	57,159	68,200	78,480	62,062	84,000	410,847
Total	2,223,878	2,112,853	2,206,425	2,265,090	2,486,696	2,473,320	13,768,262
Same period 1923	2,638,875	2,360,288	2,588,531	2,624,430	2,662,217	2,797,830	15,862,171
Difference	414,997	247,435	382,106	359,340	365,521	324,510	2,093,909



Oil Companies Re-Roofing Tanks To Reduce Fire Hazard

By Paul Wagner
STAFF REPRESENTATIVE

HOUSTON, June 14

IN CONNECTION with a series of four tank fires experienced by the Humble Oil & Refining Co., in the period from May 20 to June 2, last, the interesting point is developed that in only one case was the damaged tank of steel-roof, gas-tight construction.

The Humble's policy, ado… time ago, is to build … tanks where the time … but, naturally, a part… ment has not be… ing the co… pany … a …

no metallic contact with … The lightning is described … itself in setting fire to … no such metallic …

Fusing of … which th… de…

55's with "Wilson Welded" roofs owned by Marland Refining Co., Texas City, Texas

Reduce Your Fire Hazards

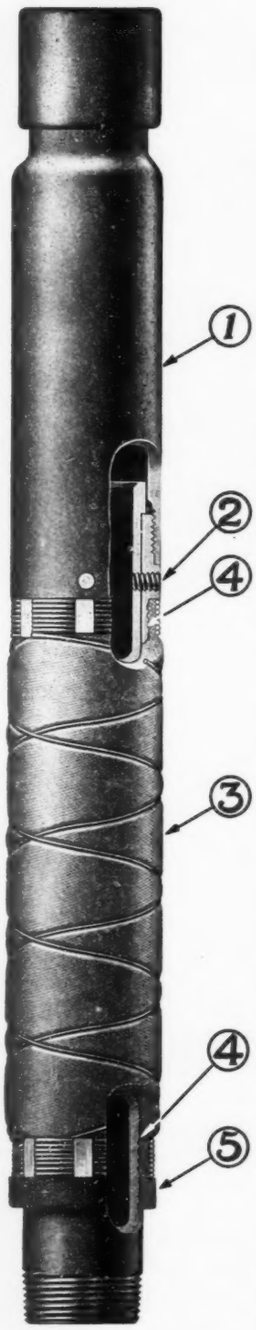
"Wilson Welded" *means* gas tight construction —less danger of fire, and a saving in evaporation losses. Moreover, "Wilson Welded" tanks are *stronger*. All of these advantages are yours at a saving in money, for if you "Wilson Weld" —both your roofs and walls—the job will be done both cheaper and quicker. Let us quote you on Wilson Welding machines and welding wire, or give you the names of contractors near your jobs who will "Wilson Weld" your tanks for you.

WILSON WELDER & METALS CO., Inc.
Wilson Bldg. Hoboken, N. J.
Canadian Distributors: G. D. Peters Co., Ltd., Montreal

WILSON

WELDING MACHINES AND WELDING WIRE

THE LAYNE



ALL CANVAS

PIN PACKER

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Unsurpassed for use in Open Holes

1
Packer Barrel.

2
Brass Pins, which prevent the Packer Barrel from being pushed down while the Packer is being lowered in the hole.

3
Canvas Packing is the best grade of close woven duck and is wrapped spirally for a distance of six feet over the Packer Stem, or wrapped longer on special order.

4
Shallow Grooves directly under retaining wires prevent the ends of the canvas packing from slipping.

5
Steel Ring, which protects and retains the end of the Canvas Packing, and makes this point absolutely leak proof.

— ——— —

This Packer can be set with the Barrel End up, or with the Stem End up, with equal results.

If the Packer is to be set in a rough or crooked hole, or to a great depth, we recommend, and will add, additional pins when instructed.

This Packer can be set very successfully on the same string of pipe or liner with any of our Ratchet Packers, or our Screw-off Packers, which enables you to use the Pin Packer any place below the Casing, with the Ratchet or Screw-off Packer in the Casing.

WRITE FOR SPECIAL PACKER AND SCREEN LITERATURE

Write or wire us your Packer or Screen Needs

The Layne & Bowler Co.

Factories:

Houston, Texas Memphis, Tenn.

LULING FIELD FEATURED SOUTHWEST IN FIRST HALF

(Continued from Page 86)

New production in the Laredo districts totals 12,535 bbls., with 17 dry holes and 11 gas wells. In the Schott Pool a sand was found at 1,900 feet from which a light gravity oil is secured, but the area seems limited. The bulk of the production comes from the original sands at 1,600-1,700 feet. Deep tests in other pools in Webb County were fruitless, but more gassers have been developed in the Bansley ranch, 18 miles northeast from the Schott-Mirando City pools.

The production is moved out in tank cars from Mirando City, where the Magnolia Petroleum Co. and the Texpata Pipe Line Co. have loading racks. Both companies have gathering lines to the various pools.

The shallow sand Callihan district in McMullen County became more prominent during the first half of 1924. The production is found from 600 to 800 feet Forty-three wells were completed with 2,605 bbls. initial output and the daily average of the district is now around 650 bbls. The output is bought by San Antonio refiners and made up into lubricants, the crude being a low gravity product.

The Somerset Field, 20 miles southwest of San Antonio, shows a decided slump when compared with last year. Many of the operators there transferred their activities to Webb and McMullen counties.

In the Rockdale-Minerva shallow sand section of Milan County, 20 wells were completed with 242 bbls. new production, two dry holes and two gas wells. This is a decline of 271 bbls.

Guadalupe, Bastrop, Medina, Wilson and Bexar counties are the attractive sections for wildcatters searching for new structures. Gas wells have been developed in Zapata, Jim Hogg, Duval and Kleberg counties and wildcat tests are drilling in these counties trying to locate oil bearing sands. The counties mentioned will continue to be explored during the rest of the year to which must be added Live Oak in which two mammoth gas wells have been found and the intervening territory south to the Rio Grande River.

Gross Production.

Gross production in the Luling Field for the first half of 1924 is estimated at 4,830,950 bbls. The field to date has produced over 6,000,000 bbls. according to the figures of engineers and purchasers in Houston. The gross for the same time in the Laredo districts is placed at 699,-513 bbls. and Somerset at 459,626 bbls. The Callihan district is credited with 140,-980 bbls. gross and the Rockdale-Minerva section with 99,538 bbls.

The Future

Both producers and marketers are rather pessimistic concerning the next six months in the Gulf Coast region. Marketers say there is a very limited demand for either Costal crude or lubricating stocks and they anticipate this condition will continue until late in the fall. Naturally, no advances in crude can be expected until the situation improves, but further radical reductions in credit balance quotations are not anticipated. Coastal crudes were divided into A and B grades July 3, 1923, the classification being based on the gravity and absence of sulphur. The daily average of the pools is now around 80.000 bbls, of which approximately 50,000 bbls. is classed as grade A and the balance B. The Texas Co. is the only buyer that makes no distinction between gravities.

Total Wells and Daily Average

At the close of June the producing wells in the Gulf Coast region numbered 2,547 and the estimated daily average gross production was 80,660 bbls., or an average of 31.64 bbls. per well. In the Southwest fields the producers totaled 876 and the gross output was 54,214 bbls. per day, or a daily average of about 62 bbls. per well. In the Luling Field alone the producing wells numbered 154 and the gross daily average at that time was 46,-200 bbls., which is a daily average of 300 bbls. per well.

QUIET HALF YEAR IN NORTH-CENTRAL TEXAS

(Continued from Page 108)

shut down waiting for orders. Estimates of the amount of production the new well can make vary, but it is believed that from present indications it will at least make a commercial producer, and may be the discovery well of a new pool.

NORTH CENTRAL TEXAS
Summary of Completed Work First Six Months of 1924

Field—	Comp.	Prod.	Dry	Gas
Wichita County	286	13,327	106	6
Burkburnett	77	3.081	33	6
Eastland	117	3.699	38	9
Stephens	100	11,222	29	6
Young	58	770	40	2
Archer	703	79,978	294	83
Miscellaneous	173	7,168	88	18
Total 6 months	1.514	119.255	533	33
T'ti same period '23	1.615	119,200	466	34
Difference	101	55	72	1

Completions by month—

Month—	Comp.	Prod.	Dry	Gas
January	165	11.693	64	6
February	176	12.652	77	7
March	211	15,684	80	3
April	333	30.296	101	8
May	290	27.023	106	8
June	339	21,907	110	8
Total 6 mo. 1924	1.514	119.255	533	33
Total 6 mo. 1923	1.615	119.200	466	34
Total 6 mo. 1922	874	128.368	312	15

NORTH AND CENTRAL TEXAS
Average Daily Production for June, 1924

Field—	No. oil wells	Av. daily Prod'n Bbls.	Av. daily Prod'n per well. Bbls.
Burkburnett	3,388	19,634	5.79
Electra	2.468	21,079	8.54
Iowa Park and K. M. A	559	4.763	8.51
Holliday and Archer County	1,102	31,658	28.73
Petrolia	364	277	.76
Breckenridge	833	11,555	13.87
Caddo	490	6,345	12.94
Clear Fork	500	8,604	17.21
Gunsight	10	72	7.20
Ranger-Eastland	672	7,840	11.67
Desdemona	324	3,160	9.75
Rising Star	16	101	6.31
Sipe Springs	164	207	1.28
Pioneer	161	2,053	12.75
Carson County	10	882	88.20
Hutchinson County	3	153	51.00
Callahan County	346	1,576	4.55
Coleman County	27	411	15.33
Jack County	1	48	48.00
Palo Pinto County	14	191	13.64
Shackelford County	433	3,606	8.32
Brown County	249	645	2.59
Total June	12.133	124.856	10.29
Total May	.....	127.094	.....
Difference	.....	2.238	.....

OIL MURDER MOTIVE PERSIAN SUGGESTS

A high personage of the Persian legation at Parie, discussing the murder of U. S. Vice Consul Robert Imbrie in Teheran, Persia, declared motives must be sought carefully beyond the mere religious fanaticism heretofore assigned as the reason. He hinted that oil rivalries might have had something to do with inciting the crowd to kill the American.

"One possible motive may have come from interests or persons opposed to Major Imbrie's activities in Teheran. Major Imbrie is said to have been advancing certain American ambitions directly opposed to the virtual monopoly hitherto held in Persia by the Anglo-Persian Oil Co. Teheran believed Major Imbrie was a powerful protector of the Sinclair oil negotiators. Many Persians connected with the Anglo-Persian monopoly of our tremendous resources might have found means of inciting the crowd to the murder."

BLUFF CITY GASSER

WAURIKA, Okla., July 26.—The Lone Star Gas Co.'s gauge placed on the gas well at Bluff City of the Oklahoma Southern Oil Co., shows a gas pressure of 300 pounds and a flow of 37,000,000 fet. The well is an offset to the Humble Oil & Refining Co.'s gasser and is in the northwest quarter of 19-7-5. The sand was entered at 647 feet and penetrated 40 feet. Drilling was suspended in the sand.

DEATH OF L. B. YOUNG

Lucien B. Young, 40, assistant purchasing agent of Cosden & Co., died suddenly at his home, 1342 South Norfolk Avenue, Tulsa. He came to Tulsa six years ago and was well known to the oil fraternity.

If You Were Judge—

In This "Court" of Actual Field Testing What Would be Your Decision in This Case?

Conservation Venting vs. Old Fashioned Vent Lines

These recent tests made in the Mid-Continent Field on two 66,000-barrel all steel tanks, 2-3 full of high gravity gasoline constitute the "evidence."

Tank No. 1 OCECO Conservation Vents.
Loss by evaporation, averaged 100 barrels every 30 days.

Tank No. 2 Old Fashioned Vent Lines.
Loss by evaporation, averaged 140 barrels every 30 days.

In each tank the surface gasoline was approximately one-half covered with Sealite blanket.

Savings with OCECO Conservation Vent Equipment were at the rate of 40 barrels per month!

With gasoline at a refinery price of 10c per gallon, the total *savings amounted to $200 per month with the use of OCECO Equipment.* The savings on tanks containing crude oil would average from 14 to 20 barrels per month, depending upon the gravity of crude.

With such big savings in favor of this equipment, evidently OCECO Conservation Vents are worth many times the cost of old fashioned vent lines, yet OCECO Conservation Vent Equipment installed does *not* cost more—*it costs even less.*

The facts speak for themselves. Wouldn't your decision be clearly in favor of OCECO? Wouldn't you conclude that every day's delay in putting off the equipping of tanks with modern OCECO Conservation Vent Units costs money?

Why not write or wire the nearest OCECO office *today* for estimates, without obligation on your part, of course?

THE OIL CONSERVATION ENGINEERING COMPANY

Manufacturers of fire-prevention and evaporation-prevention equipment for tanks

Addison Road & N. Y. C. Tracks — Cleveland, Ohio

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Beaumont Export & Import Co.
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OCECO

Wherever oil is found

you will also find the

LARKIN

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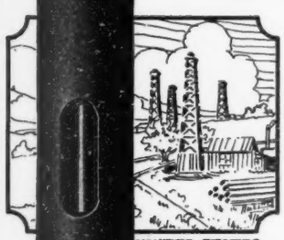
giving dependable service



Its popularity has spread rapidly since it was first introduced in Eastern fields. The one reason for its present wide distribution in service is *good results.*

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Today *The Larkin Line* is more complete than ever, but it still has its basis in the one characteristic we have always held fundamental—*thorough reliability in the performance of the duty for which intended.*

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Our new catalogue No. 25 describes The Larkin Line. May we send you a copy?

LARKIN & CO.

BUTLER, PA., U. S. A.

DEVELOPMENT WORK IN NEW MEXICO EXTENDS OIL AREA TOWARDS EAST

By V. H. McNutt

ARTESIA, N. M., July 26.—There has been a concerted effort for years on the part of oil operators to connect the producing fields of the Rocky Mountain States with the Mid-Continent Field. Within the past three years much work has been done by "wildcatters" which has resulted in the distance between the producing fields of the Mid-Continent and the Rocky Mountain States becoming less each year.

Recent development in the Mountain States, including the work done near Farmington, northwestern New Mexico, the Craig Field in Colorado and the Wellington Dome production just east of the mountains in northeastern Colorado are examples of the noteworthy additions to the oil fields typical of the Rocky Mountain region.

The Mid-Continent Field has been extended westward by the Reagan County, Texas, the Mitchell County, Texas, the Panhandle or Amarillo, Texas Fields and the Russell County, Kansas Field. The region yet intervening between the westernmost producing fields of the Mid-Continent and the easternmost producing fields of the Rocky Mountain region is at present the most active wildcat area in the United States. Many of the stronger and more aggressive companies are locating branch offices in Denver to enable their organizations better to study this big region and to keep in direct touch with developments.

Work Near Artesia

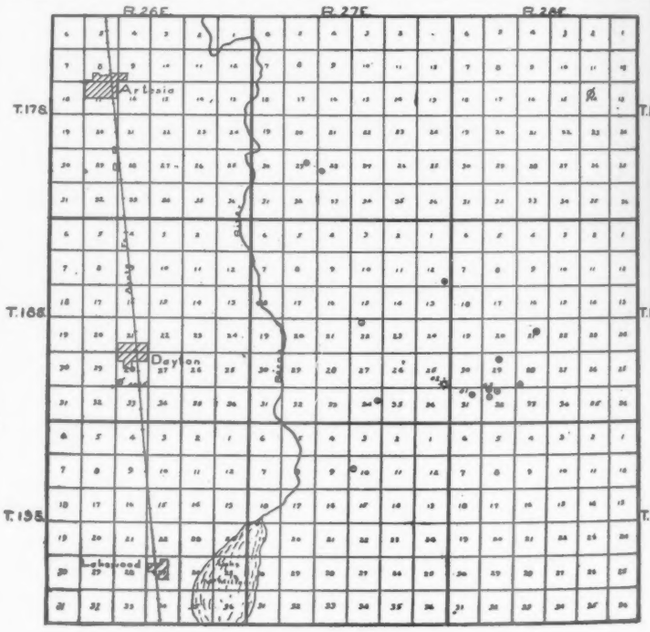
Seventeen miles southeast of the town of Artesia in southeastern New Mexico and 180 miles northwest of the Reagan County, Texas, Pool, Welch-Flynn-Yates & Dooley have opened what has the earmarks of a new oil and gas pool of some promise. The latest completion, known as No. 3, is located near the center of the north line of the NW quarter of Section 32, Township 18 south, Range 28 east. At a depth of 1,947 feet an oil-bearing sand was penetrated and was drilled through at 1,993 feet. With the exception of being shot, this well was completed in April this year and produced naturally by pumping 180 bbls. per day during the time pumped. However, with no pipe line facilities, the well was not pumped for more than two days at a time. About 10 days ago the well was given a shot of 120 quarts of nitro-glycerin and flowed over the top of the derrick six minutes following the shot. It then bridged at 1,400 feet and when the bridge was cleaned out the well made seven more flows in 12 hours, two of which went over the derrick.

Well No. 1, Welch-Flynn-Yates-Dooley, located in the center of the NE quarter of Section 31, Township 18 south, Range 28 east, was completed at a depth of 1,930 feet. It made 500,000 feet of wet gas (showing two gallons of gasoline per thousand feet) and filled up about 400 feet with 37 degrees gravity oil in the 8-inch hole. This well was, however, shut in for a gas well and now stands shut in with about 1,500 feet of oil in the hole. Well No. 2 was drilled in the southeast corner of Section 25, Township 18 south, Range 27 east and made 6,000,000 feet of wet gas at a depth of 1,940 feet. It is 1¼ miles west of No. 3 and is shut in now and is furnishing gas for all developments in the field.

Leases from State

Drilling of these wells was prompted by showings of oil found many years ago along the Pecos Valley just south of the town of Artesia. While these wells found numerous showings of oil, none of them ever made a commercial producer. Most of the development now going on is east of the Pecos River in the hills and upland prairie country.

Most of the land in this immediate area is either State or Government land. Leases on State land are secured by competitive auction sale from the State of New Mexico. The State lease is a 10-year term and as long as oil or gas is produced and has a 15 cent per acre annual rental and is an exceptionally fair lease to the operator. Government permits are filed on the Government land just as they are on Government land in other Western States, one individual taking up 2,560 acres in a permit.



Sketch map of development in Artesia, N. M., Field

Several years ago the Illinois Producers Company drilled several wells about 10 miles west of the present producing wells. One of these wells went to a depth of 4,060 feet and showed sands with several showings of oil below the present production east of the river. The log of the deep dry hole is shown below.

The wells in the Artesia field are drilled cheaply. Abundant good fresh boiler water is obtained at a depth of 130 feet. Well No. 1 Welch-Flynn-Dooley used only about 280 feet of casing and the walls stand up nicely. These wells to this sand could easily be drilled with machines. Gas for fuel is also a big item, especially in that country

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Tubing accidents are by far the worst of all pirates of oil production profits. One of your strings of tubing may drop any instant, day or night, without warning, and cause a loss of 1 to 20 thousand dollars in fishing, repairs, ruined tubing and lost production.

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where coal is expensive and wood is sold by the pound. The field is only 10 miles from a branch of the Santa Fe railroad and the climate is mild and open for year around development. The present producing sand is at a depth of approximately 1,900 feet and is a very nice, clean siliceous, hard, brown sand.

Artesia is headquarters and is a very nice, friendly, enterprising place. It will unquestionably profit more than any other town in the Pecos Valley by oil developments in this pool. The main roads are excellent and side roads are passable. Welch-Flynn-Yates-Dooley own about 75,000 acres of leases, practically solid around their wells and are going ahead with developments. They are completing arrangements for a small pipe line to the railroad 10 miles distant and a small refinery for the present needs.

The sand in which the present production has been developed is known as the Yates sand, in honor of Martin Yates, Jr., of Artesia, who has given the best years of his life and much money in an attempt to develop oil in Eddy County, New Mexico. Tom Flynn and Van Welch of Robinson, Ill., are the heaviest owners and deserve a great deal of credit for their persistent efforts to open a pool in southeastern New Mexico.

Present Development Work.

The present developments follow:

No. 1 Welch-Flynn-Yates-Dooley, center NE quarter of section 31, Township 18 south, Range 28 east, is an oil and gas well shut in.

No. 2 Welch-Flynn-Yates-Dooley, SE corner of Section 25, Township 18 south, Range 27 east, is a 6,000,000-foot gas well showing very little oil. Shut in at total depth of 1,930 feet.

No. 3 Welch-Flynn-Yates-Dooley, center of north line of NW quarter of Section 32 Township 18 south, Range 28 east, an oil well, total depth of 1,993 feet. Shot with 120 quarts and will produce about 200 barrels daily.

Welch-Flynn-Yates-Dooley No. 4, 510 feet east of No. 3, is spudding.

Welch-Flynn-Yates-Dooley No. 5 510 feet south of No. 3, is building derrick.

Welch-Flynn-Yates-Dooley No. 1, Tigner permit, NE quarter of Section 34, Township 18 south, Range 27 east; spudding.

Oscar Howard No. 1, permit, NW quarter Section 22, Township 18 south, range 27 east. Drilling at 150 feet.

Oscar Howard No. 1, permit, NW quarter of Section 10, Township 19 south, Range 27 east. Rigging up.

Picher Oil Co., SE corner of Section 12, Township 18 south, Range 27 east. Drilling at 1,700 feet.

Tigner-Windsor, SE corner of NW quarter of Section 14, Township 17 south, Range 28 east. Have encountered some salt water at 2,120 feet. This well will probably be abandoned at this depth.

V. H. McNutt No. 1, Berry permit, NE quarter Section 29, Township 17 South, Range 27 east. Drilling at 200 feet.

Rotary Oil Co. NW quarter NE quarter of Section 29, Township 18 south, Range 28 east. Shipping in tools.

Walker & Mitchell No. 1, SW quarter of Section 28, Township 18 south, Range 28 east. Rigging up.

Keys and others No. 1, SW corner of NE quarter of Section 21, Township 18 south, Range 28 east. Location made.

Several other locations have been reported, but are not definitely assured.

A number of larger companies have had scouts and representatives keeping in touch with this development, including Prairie Oil & Gas Co., Producers & Refiners Corp., Gypsy, Ohio Oil Co., Pure Oil Co., Mid-West, Sun, Humble, Humphries, Tidal and others.

Log of Well at Dayton, N. M.

Located at the NW corner of the SW quarter of NW quarter of Section 28-18s-26e, N. M. P. M. Spudded in June 9, 1919.

Depth		Strata
0-	60	Gypsum.
60-	140	Red sand.
140-	200	Clay.
200-	520	Clay and gumbo.
520-	528	Lime.
528-	566	Lime and gumbo.
566-	606	Red gumbo.
606-	802	Lime.
802-	823	White sand and water (producing sand at Brown well).
823-	1,032	Lime and sand.
1,032-	1,439	Brown lime.
1,439-	1,464	Sand, in which was gas and oil.
1,464-	2,165	Dark gray lime.
2,165-	2,175	Sand, second showing of oil, 41 gravity
2,175-	2,220	Dark lime.
2,220-	2,225	White sand; salt water.
2,225-	2,250	Dark lime.
2,250-	2,260	Slate and lime.
2,260-	2,620	Light blue to gray lime, alternating in thickness.
2,620-	2,625	White sand, salt water, about 1 bbls. per day.
2,625-	2,770	Light brown lime.
2,770-	2,785	Lime and sand.
2,785-	2,795	Dark brown lime.
2,795-	2,815	Black lime.
2,815-	2,835	Black lime containing coarse white pebbles.
2,835-	2,855	Lime.
2,855-	2,900	Lime and sand.
2,900-	2,920	Sand; showing of oil.
2,920-	2,955	Lime and sand.
2,955-	3,253	Sharp lime and sand (gray in color).
3,253-	3,263	Showing of oil (sand).
3,263-	3,415	Gray to brown lime.
3,415-	3,420	Sand; light show of oil.
3,420-	3,853	Gray lime.
3,853-	4,064	White sand and lime, exceedingly hard and sharp.

First artesian water, 566 feet; 10-inch casing set at 580 feet; sulphur water at 690 feet; 8¼-inch casing set at 1,062½ feet.

CENTRAL WEST

(Continued from Page 58)

fields of Eastern Kentucky, but realize that at the present price of crude, it is a losing game. In most instances the cost of moving material runs from 60 cents to above one dollar per 100 pounds, which means a heavy additional cost of development work. Were it not for this extra cost, the operators would feel more safe in starting new work. As things are about the only work that will be done is where leases call for offsets or to conform with lease conditions. When conditions are right, there will be much drilling done in Lawrence-Johnson and Magoffin counties as well as Floyd and others bordering the Big Sand Valley.

The Sandy Valley High Test Oil and Gas Co. is the name of a new $50,000 corporation promoted by George Chapman, of Louisa. The president is James N. Meek, an oldtime oil operator, formerly from Lima Field of Ohio, and now a resident of Louisa. Mr. Chapman is vice president and general manager, and S. M. Souders, secretary and treasurer, with offices at Louisa. This company has bought the wholesale gasoline and oil stations established by the Great Eastern Refining Corporation and all their interests in nine counties in Kentucky and several in West Virginia. The Big Sandy and Tug Valleys are included in the territory. The new company handles the Minamax gasoline and oil to retailers.

There is a little extra excitement in the western part of Lawrence County, over the find made by Garrison and Townsend in a wildcat well at the mouth of Colliers Creek, northwest a short distance from Martha. The initial well was found on the Foster-Ferguson, and opened up a wide area of wildcat territory to the north of the big development work of the Union Gas and Oil Co. The second well this firm brought in a few days ago is on the C. K. Dobyns farm, about 500 feet westward from the initial well on the Ferguson. This second well came in flowing and when put on the pump was reported putting 10 barrels an hour into tanks. Experienced oil men report this well at around 200 barrels, but others claim 50 barrels when settled down after a short term of pumping. Anyway it is a very important Weir sand find and larger than the majority of wells found in that sand. Dr. V. V. Adkins of Ashland, Ky., is reported to have found a 20-barrel well on the Laban Sparks farm, about 1,500 feet north of the initial Ferguson well. To the south about 600 feet of the No. 1 C. K. Dobyns well and on the J. E. Holbrook farm, the Union Gas and Oil Co. is drilling and due for completion.

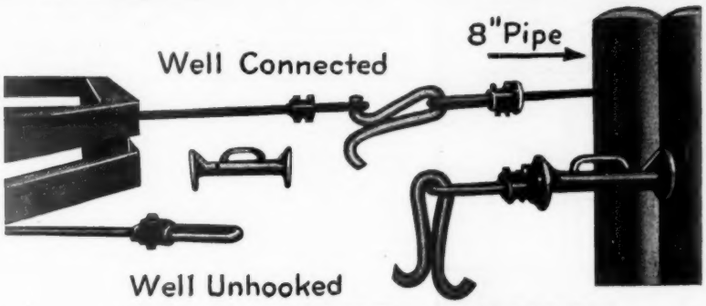
North Weir Field.

In the North Weir Field of Lawrence-Johnson counties, the Union Gas and Oil Co.'s No. 16 Andrew Skaggs farm, is a 50-barrel flush well, and No. 12 George Evans farm, 25 barrels flush, while No. 11 Martha Kelly showed 25

(Continued on Page 118)

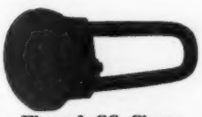
DURNELL ABLE SPECIALTIES

Trade Mark



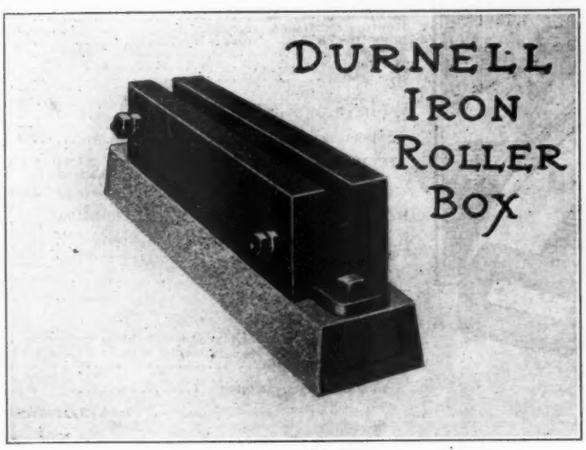
Showing Use of Flanged CC Clamp and Knock Off Block

Iron Knock Off Block



Flanged CC Clamp

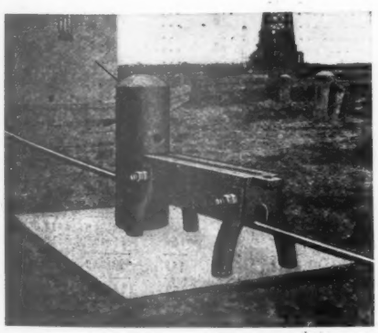
4 Bolt Polish Rod Clamp



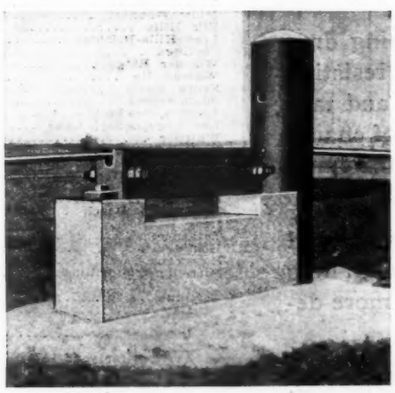
Showing 6" CC Clamp—6 Bolt Clamp and Knock Off Block

2 Bolt Eccen. Fric. Clevis

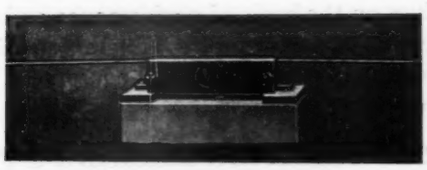
6 Bolt Flanged Friction Clamp



Used as a Hold Down at Knock Off Post



Used as a Hold Up at Knock Off Post



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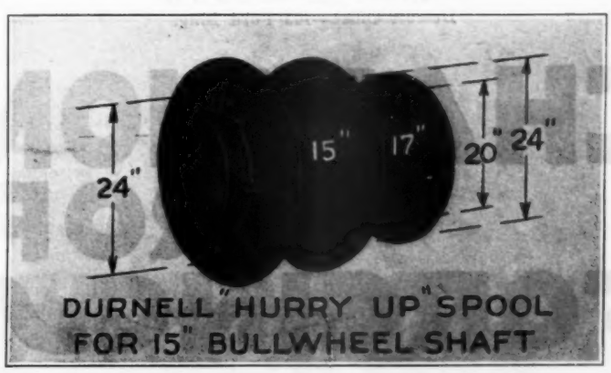
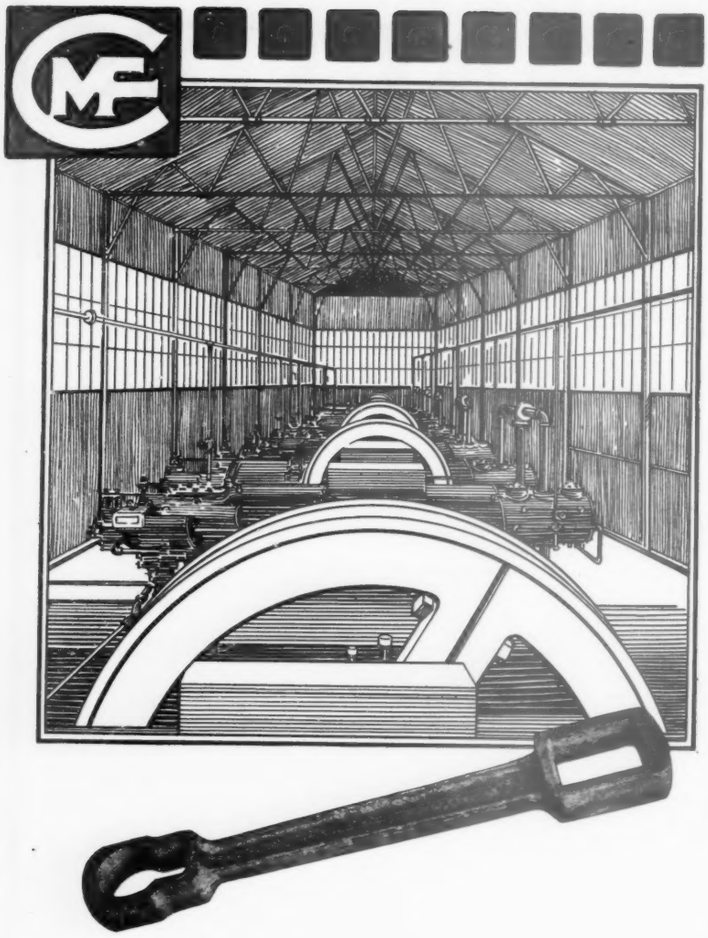


To Fit Bull Wheel Shafts—Steel Drums—Two Extra Speeds



One by one leading manufacturers are using drop forged parts for the load bearing and strain resisting parts of their products. The tough give and take strength of forged steel offers no element of chance break downs, but affords reserve stamina for emergency loads and hard pulls.

Buy on the basis of performance and endurance and you'll buy at a profit. Champion Engineers help manufacturers of oil field equipment build more dependable products.

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CHAMPION DROP FORGINGS

SUMMARY OF CALIFORNIA OIL FIELD OPERATIONS FOR JUNE, 1924

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for June amounted to 18,807,999 bbls., an average of 626,933 bbls. per day. This is a decrease of 12,860 bbls. per day under May production.

Stocks increased during the month 1,065,918 bbls. The total stocks at the end of the month were 100,577,855 bbls. The total stock increase for 1924, up to June 30, was 8,652,702 bbls.

Eighty-eight wells were completed during the month with an initial daily production of 32,209 bbls., compared with 150 wells completed during May with an initial production of 56,451 bbls.

PRODUCTION

(Figures for production and stocks are in barrels of 42 gallons.)

District—	Barrels per Month	Daily Average June, '24	Daily Average May, '24	Daily Average June, '23
Kern River	560,788	18,693	18,478	19,581
McKittrick	169,422	5,647	5,572	6,712
Midway-Sunset	3,247,200	108,240	104,308	75,899
Elk Hills	1,167,261	38,909	36,857	31,648
Lost Hills-Belridge	140,710	4,690	3,274	4,966
Coalinga	986,064	32,869	36,020	13,977
Wheeler Ridge	31,288	1,043	811	208
Watsonville	1,725	58	58	64
Santa Maria	236,066	7,869	7,207	8,472
Summerland	4,365	146	140	127
Ventura-Newhall	321,090	10,703	10,378	10,830
Los Angeles-Salt Lake	80,749	2,692	2,473	8,243
Whittier	61,899	2,063	2,089	1,833
Fullerton	351,335	11,711	12,231	13,991
Coyote	564,901	18,830	18,814	2,483
Santa Fe Springs	1,831,457	61,049	69,351	253,639
Montebello	501,524	16,717	16,745	10,941
Richfield	358,474	11,949	12,204	16,582
Huntington Beach	1,382,184	46,073	48,584	97,613
Long Beach	4,785,362	159,513	166,854	193,140
Torrance	1,716,885	57,229	57,538	4,738
Dominguez	286,025	9,534	9,584	.....
Rosecrans	21,225	708	606	.....
Total	18,807,999	626,933	639,793	755,670
May	19,833,576	639,793		
Decrease	1,025,577	12,860		

FIELD, REFINERY, PIPE LINE AND TANK FARM STOCKS OF CRUDE, RESIDUUM AND TOPS

	June 30, 1924	May 31, 1924	June Stock Increases	June 30, 1923
Heavy crude, heavier than 20° A.P.I., including residuum	49,080,055	48,089,302	990,753	40,870,548
Refinable crude, 20° A.P.I., and lighter	37,432,303	37,547,642	*115,339	28,155,786
Tops	14,065,497	13,874,993	190,504	4,299,349
Total	100,577,855	99,511,937	1,065,918	73,326,183

*Decrease.

	June 30, 1924	May 31, 1924	June 30, 1923
Total quantity of above products held at refineries	34,114,385	33,357,754	16,899,266
Total quantity of above products held in fields, pipe lines and tank farms	66,463,470	66,154,183	56,427,917
Total stocks, as above	100,577,855	99,511,937	73,326,183

DEVELOPMENT

District—	New Rigs Up	Active Drill'g	Compl'd	Daily Initial Output	Active Producing	Abd.
Kern River	2	5	3	25	2,158	...
McKittrick	...	7	1	30	277	1
Midway-Sunset	24	74	22	9,109	2,823	...
Elk Hills	3	19	7	1,990	220	...
Lost Hills-Belridge	...	6	...	.....	326	5
Coalinga	1	12	3	230	1,169	1
Wheeler Ridge	...	4	1	465	11	...
Watsonville	...	...	...	.....	6	...
Santa Maria	1	6	...	.....	292	...
Summerland	...	...	...	.....	135	...
Ventura-Newhall	3	43	...	.....	564	...
Los Angeles-Salt Lake	...	...	...	.....	518	9
Whittier	1	12	...	.....	176	...
Fullerton	...	1	...	.....	388	...
Coyote	...	5	...	.....	236	...
Santa Fe Springs	1	15	2	374	335	4
Montebello	3	9	...	.....	154	...
Richfield	1	10	...	.....	199	1
Huntington Beach	3	30	2	230	271	...
Long Beach	7	66	10	6,313	456	9
Torrance	51	114	35	10,174	362	3
Dominguez	8	23	2	3,269	9	3
Rosecrans	7	16	...	.....	1	...
Miscellaneous drilling	13	73	...	.....	.....	9
June	129	549	88	32,209	11,062	39
May	112	514	150	56,451	10,900	23
Increase	17	35	*62	*24,242	162	6
Average for year 1923	111	759	82	114,690	8,928	34
Average for year 1922	115	605	67	43,700	9,410	17
Average for year 1921	90	536	57	15,631	9,425	14
Average for year 1920	77	403	49	14,125	9,299	13
Average for year 1921	90	536	57	15,631	9,425	14

*Decrease.

FRANKLIN FOUNDRY TO VALVELESS ENGINE CO.

The Franklin Valveless Engine Co. of Franklin, Pa., whose foundry was completely destroyed by fire on May 23, 1924, has purchased the Manufacturers Foundry Co., Franklin, Pa., including complete plant and equipment, which will be operated as a part of the Franklin Valveless Engine Co.'s plant. The consideration was in the neighborhood of $160,000.

CALORIZING TUBES REDUCED

Owing to improved manufacturing facilities and increased production, the Calorizing Co. announces a reduction of 40 per cent below previous prices on the calorizing of steel tubes. The reduction in these prices will be appreciated by the refining industry at this time when they are compelled to cut operating and maintenance expenses.

CENTRAL WEST

(Continued from Page 116)

barrels. No. 15 Andrew Skaggs produced 35 barrels.

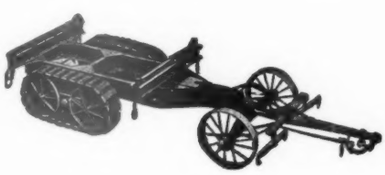
In the Irvine Field of Estill County, the Wood Oil Co.'s No. 16 and 17 Sam Tipton farm, pumped 3 barrels each, while No. 18 was dry. This company's No. 25 Floyd Rogers was also a dry hole. Scott, Prott and others' No. 4 Millard Ballard, is estimated at 5 barrels with No. 5 drilling.

Floyd County.

According to late reports from Floyd county there are prospects of a much better field than was expected. Unknown parties drilled a well on the Harkins land at Banner, estimated at 40 barrels, while a test on the Townsel Combs land on Goose Creek is estimated around 25 barrels. This is one of the oldest producing counties in Eastern Kentucky, and with better prices for crude, should show a real rush of new work.

How Much Does Mud Cost?

Hauling a heavy load of pipe on an Athey Wagon through a sea of mud.



Haul in Athey Truss Wheel Wagons and put your money into the bank— not into the mud.

"They Bridge the Soft Spots"

Mud may be considered cheap by some—but it's mighty costly to those who must suspend operations and suffer expensive delays because they do not haul in Athey Truss Wheel Wagons.

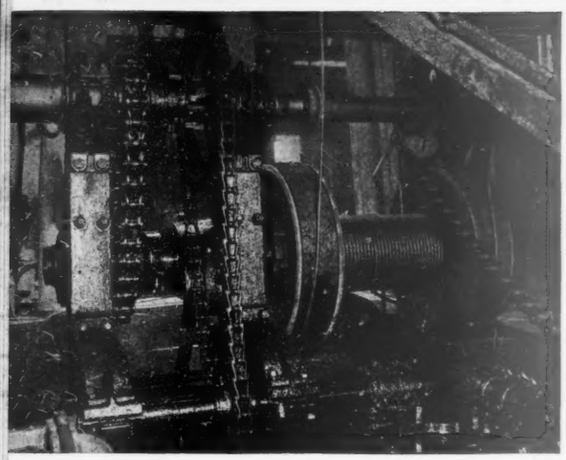
No mud hole is so deep or sand so loose, that the Athey Wagon cannot come through with its capacity load. The broad, steel track lies extended flat on the ground and bridges the soft spots as the track wheels, bearing the load, pass over it. That portion of the band carrying the load is absolutely rigid. All roads are good roads—and mud roads are boulevards to the Athey Wagon.

It is surprising the ease with which this wheel is propelled. It is made of steel—strong, durable and trouble-proof—yet the entire assembly can be rolled on a level floor by the push of one finger. Athey Wagons can carry 30 to 50% more tonnage through bad going yet require 30 to 50% less power than any other type of equipment.

Capacity 10 tons. Let us send you information and prices.

ATHEY TRUSS WHEEL COMPANY
130 N. Wells St., Chicago, U. S. A.
Cable Address: "Trusswheel, Chicago"
The Baldwin Locomotive Works, Export Agents, Philadelphia, Pa.

ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS



Why Rex Chabelco is the most widely used oil chain in the world

* * *

Year after year Rex Chabelco continues to be the largest selling chain in oil fields the world over. Why? Simply because of its proved ability to stand up to the job better than ordinary chain.

Rex Chabelco 1240, for example, set the pace for long, low-cost service because it was the first all steel chain made with notched out sidebars—a revolutionary feature that reduced "whipping action" and so lengthened the life of both chain and sprockets.

Sidebars of high carbon steel, broached for pitch accuracy, extremely tough rollers, and wear-resisting alloy steel pins, are some of the other reasons why drillers using Rex Chabelco 1240 or 1030 know they can count on steadier going and lower footage costs.

When buying new drives for your rig, it pays to be sure you get genuine Rex Chabelco —the fine result of 30 years' experience in making good oil-well chain. Look for the name Rex Chabelco stamped on the sidebars. The coupon will bring you a sample link. Mail it today!

698

REX CHABELCO

Made by

CHAIN BELT COMPANY
Milwaukee

Distributed by

Leading supply houses in all fields

Mail this today!

Chain Belt Company
Dept. L-4
Milwaukee, Wis.

Please send us the sample link of Rex Chabelco 1240.

Name.....

Address.....

GULF PORTS VESSEL SHIPMENTS INCREASED DURING MONTH OF JUNE

HOUSTON, Tex., July 28.—The movement of refinery products and crude from the Gulf ports during the month of June totals 15,658,604 bbls., the highest for any month of the year to date. It was made up of 7,723,610 bbls. of refinery products and 7,934,994 bbls. of crude, which compared with the May shipments represents an increase of 544,400 bbls. in refined and of 2,651,298 bbls. crude.

A comparison of the shipments of the larger companies with May shows The Texas Co. increased 325,001 bbls., the Gulf Refining Co. increased 41,247 bbls., Magnolia Petroleum Co. increased 169,498 bbls. and Standard Oil Co. of Louisiana an increase of 439,066 bbls. The crude movement of the Humble Oil and Refining Co. shows a decrease of 121,353 bbls. during the month.

A total of 800,303 bbls., largely Luling crude, were moved out from the Pasadena terminals of the United Central Oil Corp. of which 533,110 bbls. were consigned for the Atlantic Refining Co.; 149,866 bbls. for the account of the Beacon Oil Co. and 117,327 bbls. for the account of the Sinclair Oil & Refining Co.

Exports

Consignments of refined and crude to foreign ports aggregated 1,994,315 bbls. compared with 1,717,729 bbls. during May. The movement of refinery products total 1,757,551 bbls., an increase of 358,886 bbls. over the May record. Crude consignments were 236,764 bbls., a decline of 82,300 bbls. as compared with May.

FROM PORT ARTHUR
By The Texas Co.
Refined

Destination—	Bbls.
Coastwise	1,361,628
Export	447,319
Total	1,808,947

Crude

Coastwise	308,239

FROM PORT ARTHUR
By Gulf Refining Co.
Refined

Coastwise	2,015,910
Export	382,978
Total	2,398,888

FROM SABINE
By Sun Co.
Crude

Coastwise	319,175

FROM BEAUMONT
By Magnolia Petroleum Co.
Refined

Coastwise	*917,446

Crude

Coastwise	254,995

*Includes 143,891 bbls. manufactured fuel oil.

FROM PORT ARTHUR
By Atlantic Oil Producing Co.
Crude

Coastwise	1,219,290

FROM SMITH'S BLUFF
By Pure Oil Co.
Refined

Coastwise	12,320

Crude

Coastwise	550,772

FROM NECHES TERMINAL
By Humble Oil Refining Co.
Crude (Orange)

Coastwise	111,136

FROM TEXAS CITY
By Humble Oil & Refining Co.
Crude

Coastwise	1,461,377

FROM BAYTOWN
By Humble Oil & Refining Co.
Refined

Coastwise	798,400

Crude

Coastwise	587,864

FROM TEXAS CITY
By Vacuum Oil Co.
Crude

Coastwise	268,580
Export	40,630
Total	309,210

FROM TEXAS CITY
By Swiftsure Petroleum Co.
Crude

Coastwise	566,721
Export	118,200
Total	684,921

FROM SINCO
By Humble Oil & Refining Co.
Crude

Coastwise	113,325

FROM HOUSTON
By Galena-Signal Oil of Texas
Refined

Coastwise	248,000
Export	80,000
Total	328,000

FROM HOUSTON
By Deepwater Refining Co.
Refined

Coastwise	60,000

FROM BATON ROUGE
By Standard Oil Co. of Louisiana
Refined

Coastwise	484,506
Export	839,254
Total	1,323,760

Crude

Coastwise	1,214,387

FROM NEW ORLEANS (Storage)

Coastwise	*75,849

*Gas oil returned to Baton Rouge storage.

FROM HOUSTON
Pasadena Terminals of United Central Oil Corp.
Crude

Coastwise	*800,303

*For account Atlantic Refining Co., 533,110 bbls.; Beacon Oil Co., 149,866 bbls.; Sinclair Oil & Refining, 117,327 bbls. The bulk of this was Luling crude.

SUMMARY

Vessel Shipments of Refined and Crude from Gulf Ports During June, 1924

Company and port—	Refined	Crude	Total
The Texas Co., Port Arthur	1,808,947	308,239	2,117,186
Gulf Refining Co., Port Arthur	2,398,888	.....	2,398,888
Sun Co., Sabine	.....	319,175	319,175
Magnolia Petroleum Co., Beaumont	917,446	254,995	1,172,441
Atlantic Oil Producing Co., Port Arthur	.....	1,219,290	1,219,290
Pure Oil, Smith's Bluff	12,320	550,772	563,092
Humble Oil & Refining, Neches Terminal	.....	111,136	111,136
Humble Oil & Refining, Texas City	.....	1,461,377	1,461,377
Humble Oil & Refining, Baytown	798,400	587,864	1,386,264
Vacuum Oil, Texas City	.....	309,210	309,210
Humble Oil & Refining, Sinco	.....	113,325	113,325
Swiftsure Petroleum Texas City	.....	684,921	684,921
Galena-Signal, Houston	328,000	.....	328,000
Deepwater Refining, Houston	60,000	.....	60,000
United C. Terms, Houston	.....	800,303	800,303
Standard Oil Co. of Louisiana, Baton Rouge	1,323,760	1,214,387	2,538,147
Standard Oil Co. of Louisiana, New Orleans	75,849	.....	75,849
Totals for June	7,723,610	7,934,994	15,658,604
Total for May	7,179,210	5,283,696	12,462,906
Difference	544,400	2,651,298	3,195,698

EXPORTS

Company and port—	Refined	Crude	Total
Texas Co., Port Arthur	447,319	.....	447,319
Gulf Refining, Port Arthur	382,978	.....	382,978
Vacuum Oil, Texas City	.....	40,630	40,630
Swiftsure Petroleum, Texas City	.....	118,200	118,200
Marland Oil & Refining, Texas City (May)	8,000	77,934	85,934
Galena-Signal, Houston	80,000	.....	80,000
Standard Oil Co. of Louisiana, Baton Rouge	839,254	.....	839,254
Totals for June	1,757,551	236,764	1,994,315
Totals for May	1,398,665	319,064	1,717,729
Difference	358,886	82,300	276,586

DALLAS CO. TO ISSUE $3,000,000 OF BONDS

Announcement of a $3,000,000 bond issue, part of which is to be sold in Dallas, Texas, by the Gas & By-Products Co., has been made by H. C. Morris, vice president. The Gas & By-Products Co. controls through ownership substantially the outstanding stocks and bonds of the following companies: The Dallas Gas Co., County Gas Co., Dallas Natural Gas Producing Co. of Louisiana, Morehouse Natural Gas Co., Inc.; Panola Oil & Gas Co., United States Carbon Co., and the Excelsior Pipe Line Co.

An increase in the number of miles of mains in Dallas from 216 miles in 1912 to 495 miles in 1923 and the number of meters in service from 14,039 to 45,991 during the same period, has been recorded.

CINCHING IT

The most important news to the oil industry, especially at this time, is the weekly estimate of production of crude oil in the United States.

The Oil and Gas Journal estimates, based on the reports of correspondents on the spot in every field, have long been recognized as the most accurate. Within the past few weeks careful comparison has demonstrated beyond the remotest possibility of questioning that they are from one week to ten days ahead of all other estimates.

In last week's issue attention was called to the fact that for the week ending July 5 The Oil and Gas Journal estimates showed the production of crude had increased 22,863 bbls. although the estimate sent out by another source reported a decrease of 7,300 bbls. for the same period. But the following week the increase in production shown by The Oil and Gas Journal for the week ending July 5 was covered in the other estimate for the week ending July 12 when it was announced production had increased 24,300 bbls. daily.

As if to cinch the matter The Oil and Gas Journal's estimate for the week ending July 12 showed a decrease of 14,068 bbls. daily which a week later appeared as a decrease of 15,350 in the report of the other estimate for the week ending July 19, when The Oil and Gas Journal, on the contrary, showed an increase of 1,749 bbls.

This close following of The Oil and Gas Journal figures, both up and down, a week later, over an extended period, can not be attributed to mere chance. It can be the result of but one thing, that The Oil and Gas Journal figures are that much ahead.

Detailed comparison of the estimates by fields will corroborate this conclusion. In some fields The Oil and Gas Journal reports are at least ten days ahead and in most others a week ahead, a difference in time as great as between telegraphic service and reports by mail.

REFINING AND MARKETING

STATE OF NEBRASKA FILES NEW AFFIDAVITS

OMAHA, Neb., July 26.—The State of Nebraska has introduced additional affidavits in district court in Omaha in support of the suit of Attorney-General Spillman against the Standard Oil and 14 other oil companies in which he alleges a combination exists to fix the price of gasoline and other petroleum products.

The trial was postponed to give the State time to digest a number of defense affidavits denying the existence of a price-fixing combine.

The State's newest affidavits were by Mayor James C. Dahlman of Omaha and urton C. Jennings, operator of a 'cut-price' oil station in Omaha. Jennings, in his affidavit, says C. M. Sutherland, secretary-treasurer of the Nebraska Independent Oil Mens Association, tried to discourage him from opening a filling station.

Mayor Dahlman, in his affidavit, says Morris Milder, president U. S. Oil Works; Stockton Heth, treasurer and manager Nicholas Oil Corp.; G. A. Steele, vice president Manhattan Oil Co., and one or two others called upon him and urged him to stop City Commissioner John Hopkins from operating a municipal filling station in Omaha.

ASK REASONABLE RATE ON STEEL SHIPMENTS

Reparation on past shipments and a reasonable rate on certain steel commodities for the future was asked in a brief filed with the Interstate Commerce Commission in Docket No. 15716, Cosden Oil & Gas Co., vs. the Atchison, Topeka & Santa Fe Railway Co. and others. The complaint involves rates on iron and steed pipe in straight carloads and iron and steel pipe in mixed carloads, with oil fields supplies, including derricks and tanks and tank materials, between Kansas and Oklahoma points.

The brief and argument in this case is signed by L. W. Witte, H. W. Roe and P. A. Conway, as attorneys for the complainant and the intervener, the Western Petroleum Refiners' Association.

ADD STEEL STORAGE AT WATSON STATION

WATSON STATION, Cal., July 26.—A total of 500,000 bbls. steel storage capacity will be completed at the refinery of the Pan-American Petroleum & Transport Co. here when the tanks now under way are finished. The steel tanks are being completed in addition to the large concrete reservoirs capable of storing several million barrels of oil. The increase in steel storage is taken to mean that the concern expects to store large quantities of light oils at the refinery.

Preliminary work is under way on the pipe line which will connect the refinery with the Elk Hills and Midway fields and actual construction will start soon. This line will bring large quantities of crude crude from the northern fields to refinery here in additon to the increasing amounts being secured in the fields of Los Angeles harbor.

CRACKING CASE SET SEPT. 20

CHICAGO, July 25.—The case of the United States Government against the oil companies regarding the alleged misuse of the cracking process patents has been set for September 20. The office of the assistant United States attorney in Chicago gave out the information that an earlier date had been set, but upon request of the defendants the attorney general had agreed to delay. The trade believed the case will be long drawn out.

GROUP 3 AND NORTH TEXAS REFINERS FILE PETROLEUM RATE COMPLAINTS

The question of freight rates on petroleum and petroleum products which came up at Excelsior Springs, Mo., during June, 1924, when the Interstate Commerce Commission held a hearing on Docket Nos. 15584 and 15585, has broken out again with the filing of complaints with the Interstate Commerce Commission by representatives of Group 3 refiners and the North Texas refiners. In this way all groups are gradually coming into the rate fight before the commission, which is expected to consolidate the two recent complaints, filed in the nature of cross complaints, with the original rate complaints, when they come up for hearing, expected to be held in Kansas City, Mo., in October.

One of the new cases was filed as Docket No. 16065, Barnsdall Refining Co. and others vs. Louisiana & Arkansas Railway et al, alleging excessive, unjust, unreasonable and discriminatory rates on petroleum and its products from points in Oklahoma, Arkansas, Kansas, Louisiana, Missouri and Texas to destinations in Missouri, Illinois, Louisiana, Indiana, Wisconsin, Iowa, Minnesota, North and South Dakota, Nebraska and the northern peninsula of Michigan and other States. The prayer is for the establishment of just and reasonable rates on this traffic.

North Texas Enters

The North Texas refiners entered the controversy in filing Docket No. 16066, North Texas Petroleum Traffic Bureau vs. Louisiana Railway and Navigation So., et al, alleging discriminatory rates on petroleum products from the North Texas group to destinations in Missouri, Illinois, Indiana, Wisconsin, Iowa, Minnesota, and and South Dakota, Nebraska and the northern peninsula of Michigan in that they are higher, mile for mile, than the rates maintained from points in Louisiana and South Texas to the same destinations. The prayer is for the establishment of just and non-discriminatory rates.

In Group 3 complaint, other companies mentioned as complainants are Cosden & Co., the Empire Refineries, Inc., Marland Refining Co., Producers & Refiners Corp., Shaffer Oil & Refining Co., Tidal Refining Co., and the Transcontinental Oil Co.

The original rate complaints, Docket Nos. 15584 and 15585 were filed by the Kansas City refiners and the Kansas (Group 2) refiners, under the belief that they should be accorded differentials under Group 3 rates on shipments to Western Trunk Line territory. At the Excelsior Springs hearing the railroads made no defense, limiting their testimony to a proposed readjustment, realizing that the contentions involved were primarily a dispute between the refiners of the different groups.

From the indications at Excelsior Springs, the entire rate structure on petroleum will be revised, as a result of the entrance of refiners in other interested groups, several of whom have already intervened. Other groups are expected to file their cases. The entire matter has resolved itself into a 12-cornered fight on freight rates which includes the refiners of the following groups, each striving for preferential rates: Kansas City group, Eastern Kansas group, Central Kansas group, Eastern Oklahoma group, Enid group, Ardmore group, North Texas group, Breckenridge-Ranger group, Houston-Beaumont group, New Orleans group, Shreveport group and El Dorado group.

General Revision Expected

It is admitted by all parties that the present petroleum rate structure is in a chaotic condition. Favorable decision in one case affecting one group, might tend to work a hardship on a competing group with the result that nothing short of a general rate revision is now expected. The various groups, seeing this trend, have decided to jump into the controversy with their own cases, as in Docket Nos. 16065 and 16066.

Impartial observers feel that higher rates on petroleum and petroleum products will generally prevail with a settlement of the controversy by the Interstate Commerce Commission.

A. O. M. A. MEETING TO DEBATE PROBLEMS

CHICAGO, Ill., July 26.—The semi-annual meeting of the American Oil Men's Association will be held here during October, according to the decision of the directors. Several industrial leaders have promised to speak and will discuss problems threatening industry.

Instead of the usual convention with its equipment display, the meeting will be given over entirely to the serious consideration of the industry's difficulties. Every effort is being made to provide a program which will attract all members and oil men not only from the standpoint of entertainment, but instruction.

Sheldon Clark, vice president of the Sinclair Refining Co., was selected to head the committee in charge of the program.

At the meeting of the directors, John D. Reynolds, secretary of th association, outlined the proposed plan for nation-wide education campaign as presented to the American Petroleum Institute recently. The special publicity campaign of American Oil Mens Association was also discussed and additional progressive steps regarding educational methods were adopted, including the dstribution of the association's pamphlet, "Facts, Figures and Problems of the Oil Industry."

KANSAS REFINERY NOW FURNISHING ZERO TEST

The Kendrick Oil Co. of Tulsa has announced that it is now acting as sales agent for the Kansas Oil Refining Co. of Coffeyville, Kan., and that it will be enabled to furnish zero cold test lubricants to the trade for this concern. It has been necessary for lubricant users to go to the Gulf Coast refineries for the bulk of all zero cold test lubricants and the announcement that this concern is now marketing this grade of material is causing a number of inquiries. John C. Miller has been placed in charge of the lubricating sales by the Kendrick Oil Co. and will handle these low cold test oils.

EMPIRE REFINERIES TRANSFER

CHICAGO, July 26.—The management of the Chicago office of the Empire Refineries, Inc., has been assumed by L. C. Pratt, who succeeds Ray Beitzel. Mr. Pratt has been in charge of the Atlanta office, where he made a record for efficiency and activity. Mr. Beitzel is now in charge of the Fort Worth office. P. M Miskell, general manager of the Empire Refineries, Inc., Tulsa, was a visitor at the Chicago offices during the week.

SINCLAIR SERVICE STATIONS.

The Sinclair Consolidated Oil Corp. is contemplating the erection of additional service stations in the States in which the company operates, according to reports current in New York. At present, it is stated, the company is acquiring locations in New York Sttae outside of the metropolitan area to compete with the Standard Oil and other large organizations.

GOV. BRYAN DECLINES NEW GASOLINE ROLE

OMAHA, Neb., July 26.—The gasoline price control plan advanced by some of the cutrate gasoline men of Omaha to Governor Bryan has been adopted by the Governor, after he had taken a lot of the "teeth" out of it. But independent oil dealers of the State, whose cooperation was thought necessary, are refusing to adopt the new plan.

In brief, the plan, as advanced to Governor Bryan, was that the Governor publish cost price of gasoline and freight rate to Nebraska every day, or least once each week, and then for the governor to make public a "fair" price for gasoline, permitting public opinion to cause enforcement.

The Governor cut the part he was to play in the plan and left it to each individual to discover the cost of gasoline at the refinery and the freight rate, and stated that 4 cents per gallon profit was a fair price.

The Governor was told the independent oil men would all follow the original plan. The information was given him by the cutrate dealers. But the independent oil men have refused to follow the plan and have declared that 4 cents profit per gallon is not sufficient, overhead being considered.

City Commissioner Hopkins of Omaha, in charge of the Omaha municipal gasoline station, has announced he is opposed to the Governor's plan.

VACUUM NOT TO BUILD IN EUROPE JUST NOW

OLEAN, N. Y., July 25.—The plant of the Vacuum Oil Co., in Olean is more modern than any refinery in all Europe, according to E. H. Wright, works manager of the plant, who has recently returned from a trip to Europe, where he was called in an attempt to locate two sites for additional Vacuum refineries.

The new sites in Europe were sought as a means of eliminating the high taxes and tariffs placed on refined oils imported into the European countries from America. These tariffs are levied on oil imports and are as follows: Regular duties, surtaxes and turnover taxes, which which are levied on all financial transactions and amount to 3 per cent.

Mr. Wright feels that construction of additional refineries in Europe will be impossible until Central Europe becomes more prosperous and the countries unite in such a way that the inter-country tariffs are eliminated in business. The largest refinery in Europe is only one-third the size of the Vacuum plant here, Mr. Wright says. The local plant has a capacity of 7,000 bbls. daily.

SLAGHTER UNITS INSTALLED

BRISTOW, Okla., July 28.—Four of the six stills used in the new units of the Slaghter cracking process which is being installed at the plant of the Transcontinental Oil Co. here, were put into operation during the past week and add six units are expected to be operating before the close of the present week. The six units will run about 1,000 bbls. of gas oil daily, from which about 40 per cent gasoline output is expected.

OLYMPIC BUYS CRUMP-STEELE

LOS ANGELES, Cal., July 26.—The Olympic Refining Co. has purchased the holdings of the Crump-Steele Co. at Long Beach and Mormon Island, Cal. H. L. Burleson of Los Angeles is in charge of the Olympic Refining Co. here, which is said to have the backing of large eastern capitalists. Nr. Burleson until recently was connected with the Seaboard Petroleum Co.

If you now want a Double Dubbs Unit with a daily throughput of 2,000 barrels Charging Stock, whether Gas Oil or Fuel Oil with a daily production of 1,000 barrels gasoline, you can have it You can only get such results from the Dubbs Cracking Process

And this with the lowest Capital Investment and Operating Cost per barrel of gasoline produced

Universal Oil Products Company
Owners of the Dubbs Process
312 South Michigan Ave
Chicago Illinois

Mining and Refining at Pechelbronn

Drilling Wells, Sinking Shafts and Treating Sand Employed to Extract Oil. Refinery Adopting Many American Methods

By Elbert C. Isom.

Located in the little village of Merkwiller in the Rhine Valley, province of Alsace, France, the Societe Anomyme d'Exploitation Minieres Pechelbronn operates as an intergal unit a small oil field and refinery which, both from the standpoint of past history and modern practice is unique.

The petroleum industry of Pechelbronn (literally "Pitchsprings" in the Alsatian dialect), dates back to the year 1481, eleven years before the landing of Columbus in America, when it was discovered that the fluid bitumen seeping from petroleum springs in the locality could be reduced in open kettles to a pitch-like residue and used to grease the wheels of farmer's wagons. As the supply from the springs diminished and the demand for the products increased, mining operations were started, at first only in shallow pits but later shafts were sunk, the oil being extracted by washing the mined sand with hot water. This method was continued until about the year 1849, when it was abandoned in favor of the forerunners of modern drilling just then coming into use. Though a slight amount of oil has always been produced from the mines, drilling was by far the most popular method until the Great War 1914-1918, when the Germans then in possession of Alsace, being hard pressed for petroleum products of all kinds reopened the old mines in order to increase the production of Pechelbronn Field. They modernized the equipment and greatly extended the galleries so that new the mines produce an amount of oil equal to that of all the wells in this field.

Three Ways To Get Oil.

The Pechelbronn people consider that there are three steps in the extracting of crude oil from oil sands beneath the earth's surface. The first is by means of drilled wells as practiced in our own American fields. Up to the present time about 5,000 wells have been drilled in the Pechelbronn Field, of which 550 are now producing at the rate of 3,500 tons (24,500 barrels) per month, or an average of 44.5 barrels per well. Pay sands occur in lenses and along nearly parallel fault-lines striking in a general northeasterly direction as will be noted in the accompanying sketch. They are reached at depths varying from 75 to 300 meters, or about 250 to 1,000 feet. Some 36 new wells were in the process of drilling at the time of the writer's visit there in November 1923, and it was expected that the production would thus be increased to 5,000 tons in the course of the next few months.

The crude oil as it comes from the wells contains about 40 percent of water by volume, most of which is settled out in the field settling-tanks. It is a semi-asphalt base oil, brownish-black in color, 0.870 specific gravity (31° B.) and fractionates as follows:

	Percent
Benzine (gasoline)	5½
Kerosene	25
Gas oil	10
Spindle oils, light and heavy	12
Lubricating oils	18
Paraffin wax	2½
Asphalt, soft and hard	18
Petroleum coke	1
Loss (crude to finished products)	8
	100

Contrary to Polish and Russian practice, the wells are pumped instead of being baled. These wells are small compared to those of the average American field, the best producer they ever had yielding but 12 tons (about 85 barrels) per day. Electricity is the drilling and pumping power employed, each well being equipped with individual motor drive, although in many instances those on pump are close enough together to permit the use of a central pumping "power." About 500 men are employed in the fields for maintainance, operation and drilling.

Mining Follows Drilling.

At Pechelbronn mining is considered to be the second step in the extraction of crude oil from oil sands. After the gas and about 15 per cent of the petroleum content of a sand has been removed by means of the wells described, the production by that method becomes so slow as to render further pumping unprofitable. Galleries from existing work are then extended to the sand, or else a new shaft is sunk to reach it, and galleries run from that. There are six shafts at Pechelbronn of about the same average depth as the wells. Two of these however, Nos. 3 and 4, are now used only for air-shafts, and for transporting men and material from one level to another below ground. All except Nos. 5 and 6 are connected by subterranean galleries, and these soon will be reached by the network extending for miles under this region. The face of the formation was being worked in 15 places, and it was expected to bring the production of the mines from 3,500 up to 4,000 tons per month, making a total output from mines and wells of 9,000 tons (63,000 barrels) per month, instead of 7,000 tons (49,000 barrels) as at present.

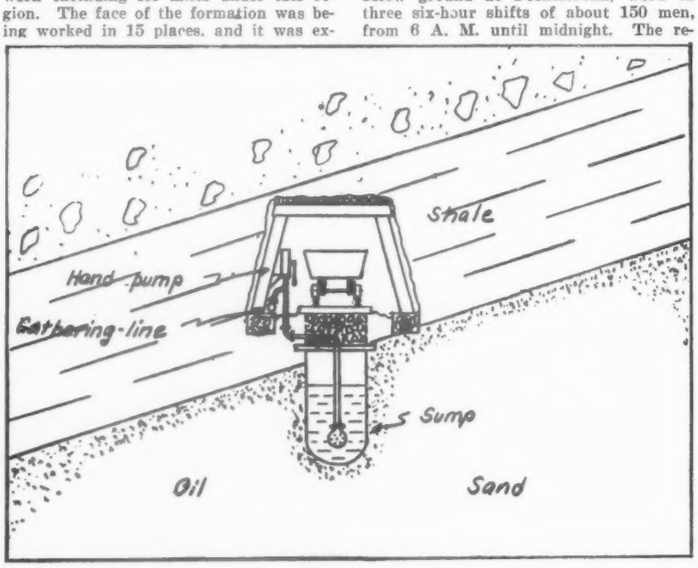
Location of Pechelbronn

As will be seen from the accompanying sketch, the modern galleries are run not in the oil sands themselves, but in the overlying shale. Powerful electrically-driven blowers located at the shaft-heads provide forced ventilation to all galleries. The air was remarkably fresh and clear even at the lowest levels, and though the walls were in many places oozing oil, only a slight odor of gas was noticeable. Frequent samples taken in the works show less than ½ per cent by volume of hydrocarbon gas. Great care is exercised at all times to guard against fire or explosion. Compressed air carried in mains throughout is the only power employed below ground. Working the faces is accomplished by means of pneumatic picks to lessen the danger of sparks being struck. All pumps except those operated by hand are air-driven. Unshod ponies draw the cars through the galleries and individual electric torches are provided to every person entering the mines.

Method of Operation

The mining operations are as follows: Pits are dug at intervals from the floor of the galleries into the oil-sands beneath, as illustrated in the accompanying sketch. Into these pits the oil seeps from the surrounding sands. A short suction line is run into the pit or sump from a hand pump located directly above on the wall of the gallery, and discharging into one of the gathering lines. At regular intervals, based upon the rate of oil seepage into the sump, an employe passes through the galleries and gives each pump a few turns. The oil thus discharged into the gathering line runs by gravity to a central settling tank located at the lowest point of that particular system of galleries. From there it is picked up by duplex steam pumps operating on compressed air, and delivered to surface storage tanks along with the crude from the wells. It is similar in quality to the oil from the wells, but contains less water.

The approximately 500 men employed below ground at Pechelbronn, work in three six-hour shifts of about 150 men, from 6 A. M. until midnight. The remaining 50 men are for the purpose of maintenance and repair, and work from midnight until 6 A. M. Labor is scarce in this locality on account of it being so far from any large town. Strasbourg at a distance of 60 kilometers (37.5 miles) is the nearest city of any size. Some workmen come as far as ten kilometers on foot. The company is now erecting very attractive homes for its people in order to relieve this condition.



Method of Mining

Treating the oil-sands themselves will be the third step in the production of crude oil at Pechelbronn and will be carried out in those sands which no longer yield profitable results to the mining system. In this step the actual oil-bearing sands will be mined after having been partially exhausted by the two foregoing methods and the last bit of petroleum they contain will be recovered, either by retorting as practiced in the shale oil industry, or else by extractors similar in construction to the percolator filters in use in this country, in which the oil-sands will be washed with benzol or some other suitable solvent that can later be recovered from the extracted oil. Both systems are under consideration and the writer was informed that experiments were soon to be undertaken to determine the most efficient method, although they are not yet actually confronted with the necessity of securing their crude oil in this manner.

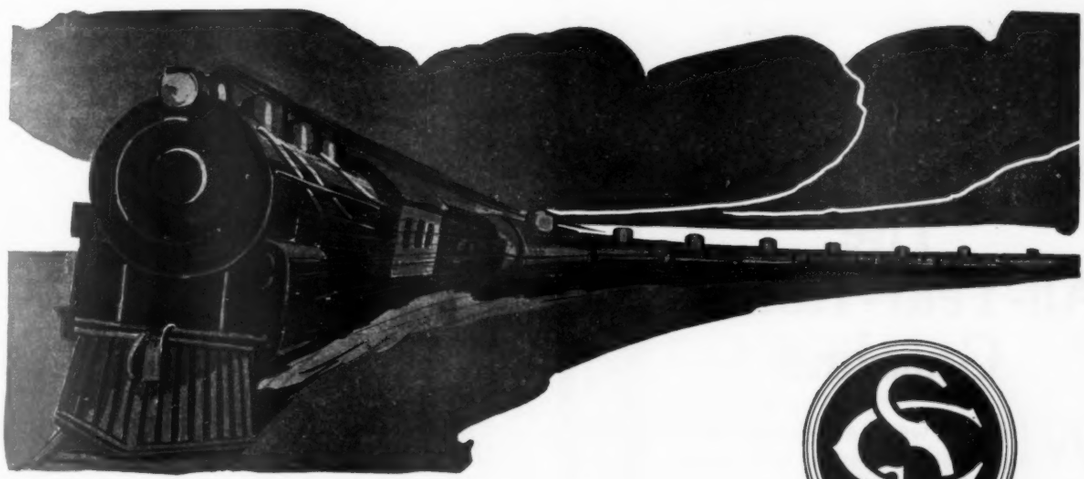
Operation of Refinery.

The operation of the Pechlbronn refinery is briefly as follows:—From storage tanks of various capacities crude oil is run to two vertical fore warmers of 500 tons (3,500 barrels) each. Here it is heated by the residue from the succeeding stills, a small amount of light-end is taken off and any water remaining in the oil is settled out. From the fore-warmers the oil is fed by gravity to a battery of six continuous crude stills, varying in content from 20-40 cubic meters (about 125-250 barrels.) These are of the horizontal cylindrical type and are coal fired in double internal fire tubes. An additional still of forty cubic meters capacity was under construction and almost complete. About 30 per cent of the oil is distilled off in this battery consisting of 5-6 per cent benzine and 24-25 per cent kerosene. The distillates are refined in four small agitators of 20 cubic meters capacity each, neutralized, washed and allowed to clear in open indoor tanks. The finished products are packed in cans of various sizes, or in drums.

The "masout" or topped crude, is piped to the refinery proper about a quarter of a mile distant, the crude stills, agitators and canning plant being built upon the site of an ancient works unsuitable for expansion. All subsequent operations are carried out in the new refinery which is well laid out and modern in every respect, and so located that it may readily be enlarged as necessity requires. Here the masout after passing through suitable heat exchangers, is charged to a continuous battery of six high-vacuum stills of the type used in many refineries throughout Europe for the manufacture of lubricating oils. The residue from this battery passes immediately to another comprising eight stills of the same type and construction. The first battery takes off the gas oil and spindle oils, while the second, which is run much more slowly, produces lubricating oils and wax distillate. The lub oils thus produced under vacuum require no further treatment except settling in a hot room, which also serves as hot storage. The wax distillate is treated in much the same

Continued on Page 140)

Rushing Natural Gasoline to our Customers by Trainload



"Ship at once train load of natural gasoline"—more than once a big customer has sent us such a wire.

And the train is thundering on its way within a few hours—every car containing the exact specifications wanted.

This is the service this company can give its patrons. Any reasonable amount of natural gasoline shipped at once in guaranteed specifications.

Chestnut & Smith Corporation

General Offices—Chestnut & Smith Bldg.—Tulsa, Okla.

The All-Year-'Round Gasoline

WINTER weather—frozen radiators, stiff motors, bad roads—puts gasoline to a real test. Gasoline that gave satisfaction *all winter long*, will give satisfaction *all-year-'round*.

The gasolines marketed by us for the Imperial Refining Company of Ardmore and the Kettle Creek Refining Company of El Dorado stand the test of winter weather. These gasolines being straight run, contain no cracked gas, have very low boiling and end points and do not require the use of any "anti-knock" compounds.

The Imperial Refining Company produces a 58-60 gravity, navy grade gasoline embodying the full specifications. The Kettle Creek Refining Company produces the same 58-60 full navy grade, all properly refined and doctor test. These two refineries market their entire refined output of 10,000 barrels per day exclusively through us.

With ample storage and plenty of our own tank cars, we can give you an exceptional service on these gasolines that stand the test, and will enable you to compete with all grades of competition with the least cost to the consumer.

IMPERIAL

General Offices—Atlas Building, Tulsa, Oklahoma.

GASOLINE KEROSENE NAPHTHA GAS OIL DISTILLATE FUEL OIL ROAD OIL

BIG GASOLINE DEMAND IN EAST AS WEATHER CONDITIONS IMPROVE

By N. O. Fanning

NEW YORK, July 28.—Weather conditions in the East during the last few weeks has been ideal from the standpoint of motoring and refiners and marketers of gasoline report consumption at its highest of the year. The effect of crude oil reductions is still being felt and has brought about further cuts in gasoline in the eastern territory. There is also a disposition on the part of the trade to move gasoline as rapidly as possible so as to effect a reduction in the large stocks that have mounted during the spring and summer, and this has tended to soften prices. However, where a week or so ago surplus gasoline was appearing in quantity in the markets and competitive conditions in some localities were seriously affecting prices, the recent cuts have nullified this situation to a certain extent. Some of the large refiners are reporting healthy reductions in stocks of gasoline on hand. Not so long ago it looked like there was not going to be any such thing as an established price for gasoline and had not the crude oil cuts occurred when they did the best that could have been said for the gasoline price market would have been that it was shot to pieces. On the whole, while refiners are going into the peak of their demand season on a declining price market, conditions are looked upon as more healthy than if the refiner had attempted to continue to market his galosine on a high cost crude basis.

Locally it is believed that gasoline prices will go lower on the present movement. Possibly a decline f a cent or two may occur shortly, at which level gasoline prices in the East should hold fairly firm during the remainder of the summer, according to those close to conditions.

Need Large Consumption

It will take a sustained heavy demand for gasoline in the big consuming centers of the east to clear up the stock situation here. It is true that heavy runs of crude and accumulation of gasoline stocks continued to be the policy of east coast refineries throughout the early part of the year and until recently, this being the only way individual companies could figure on meeting the expected and now materializing largely increased demand on the part of motorists and on getting their share of the increase in business. It will take the month of August to show whether this policy was justified. It is known that hesitancy on he part of big refiner purchasers of crude o continue buying crude at existing rices, with gasoline continuing to show a tendency of backing up, had a pronounced effect in weakening the crude price market. By the same token, if gasoline does not move freely from now on and if storage gasoline is not greatly reduced during the next month, further cuts in crude oil must be expected with gasoline prices naturally affected. At the moment, however, refiners report gasoline moving along steadily, and consumption making new records weekly.

East coast refineries produced in the first quarter of this year 408,100,000 gallons of gasoline, against 300,403,000 gallons for the first quarter of 1923. In April and May 263,923,000 gallons were added to production, compared with 222,375,000 gallons during the same months of last year. Altogether through May, these refineries have turned out 672,023,000 gallons as against 522,778,000 gallons for the same five months of 1923, an increase of 149,245,000 gallons. Stocks held by east coast refineries at the end of May totaled 372,343,000 gallons, against 246,275,000 gallons on December 31, 1923, and 274,342,661 gallons at the end that consumption in the territory served of May, 1923. These figures indicate must average well over 30 per cent higher than last year if the refiners hope to enter the winter in a good position as regards stocks of gasoline on hand. With the backward spring taken into consideration, consumption during the summer will have to increase proportionately more to bring about this result.

Kerosene Market Weak

The kerosene market in the East is seasonably weak, and further price cuts have occurred. The situation as regards kerosene reflects large existing stocks and a stagnant demand. Entering into the domtstic Condition, is the factor of export demand which is reported slow and generally unsatisfactory. The entire export market is more or less weak. The heavy outward movement of gasoline, kerosene, fuel oil and lubricating oils of the first few months of the year reflecting previous good contract buying came to a more or less abrupt stop as interim orders failed to be placed. Foreign buying is still described as on a hand to mouth basis. It is expected, however, that recent cuts and possible further immediate reductions in export prices will mark a general revival of buying. It will take some little time for this expected awakening to have its effect on the actual movement but there is every reason to believe that if the present conference of the powers on German reparations has a successful conclusion, a big expansion of foreign trade in oil will take place.

Fuel oil in the east is wabbly. There have been no recent changes in the price of bunker oil but those in close touch believe that if any change does occur it will be downward. One of the features of the market of the east this year has been the strength of fuel oil. Stocks of gas and fuel oil at east coast refineries at the end of May were 168,254,000 gallons, as against 172,634,000 gallons at the end of April, and show a steady decline from 263,811,000 gallons at the end of last year. Factors in the present situation are continued heavy shipments from the Gulf Coast, Mexico and California, coupled with a slipping demand. Coal can be had for almost any price now, according to reports in the trade, and many industrial plants are converting back from fuel oil to coal. It may be that the fuel oil market can weather the present storm and that no price change will occur in the near future, but at the moment the tendency is downward with a possibility of a development in that direction.

Lubricating oil prices have been adjusted downward and the market is described as still being soft. However, the demand for motor oils is on the upgrade and is saving a situation that otherwise might have been more or less serious at this time. The slowing up of general business, the widespread uncertainty affecting contractual business or anything like new commitments, has been having its effect on lubricating oil sales. Furthermore, the possibility of lower prices has been hanging over the market for some time. Reports of improved business generally and the lower prices effective in lubs made it reasonable to assume that better buying will be experienced soon.

Diesel oil and furnace oil are holding generally firm. Wax is firm.

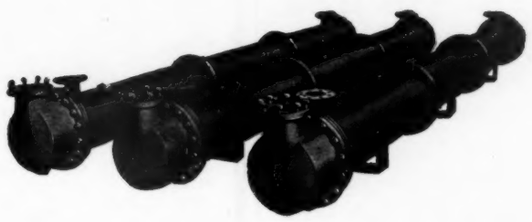
RANGER-WICHITA CO. PLANT WILL RESUME

WICHITA FALLS, Tex., July 28.—The skimming plant of the Ranger-Wichita Refining Co., which has been shut down for some time will resume operations under new management according to information here. Men are at work getting the plant in shape for operation in August. No announcement has been made as to the management, although it is understood that it will be local people.

The plant was built in 1919 by the Red River Refining Co. It changed hands a couple of times during the next two years but has not been operated consistently for over two years. The Griswold Oil Co. of this city leased the plant for a short period last year.

Over 2000 in service

—the proof of performance



Griscom-Russell
Multiwhirl
and
G-R Vaneflo

Heat Exchangers—
Dephlegmators—Coolers

G-R Vaneflo Heat Exchanger—Type bundle only, with drawn from shell.

Maximum rate of heat transfer, minimum oil pressure loss, least space for required capacity, sturdy construction and easy cleaning features—these are some of the reasons for the popularity of Griscom-Russell apparatus.

Wherever heat is to be transferred from one liquid to another, the Griscom-Russell engineers have developed highly efficient processes and equipment based on half a century of experience.

Your crude stills, re-run stills, cracking stills, steam stills, absorption, compression, and extraction plants all offer opportunities to perform heat transfer processes quicker, more effectively, and at least cost with Griscom-Russell apparatus.

Multiwhirl Heat Exchanger, showing arrangement of helical paffle.

Bulletin 910 will interest you—send the coupon for copy

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Please send copy of your Bulletin 910 on G-R Apparatus for Oil Refineries.

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O&GJ 7-29-24

The Test of the Useful Wholesale Oil Jobber

The justification for profit lies in the investment of money in tangible assets used in the production or distribution of any commodity.

A man with a thousand dollars invested in a printing press is entitled to a profit for converting raw paper and ink into your office stationery.

On a larger scale, the concern with great foundries, forges, machine shops and assembly plants is justified in taking a profit for converting iron, steel, leather, glass, wood, rubber and other materials into a motor car.

Judged on the selfsame basis, the Wholesale Oil Jobber with thousands upon thousands of dollars "tied up" in great storage tanks and tank cars is entitled to his small profit for storing and shipping oil.

Any man who invests his dollars and his time and his energy in making a product easier and cheaper and quicker for you to get "as you want it when you want it", is rendering a self-justified service.

Acme renders such a service. Acme's gross profits come from infinitesimally small individual profits. Test Acme service—it will pay you.

(This is seventh of a series of informatory advertisements on distribution problems with which the Oil Industry has to contend.)

A C M E

Petroleum Company

Executive Offices: 624 S. Michigan Ave., Chicago

KANSAS CITY, MO. Land Bank Bldg. **DALLAS, TEXAS** Magnolia Bldg.

OIL STORAGE PLANTS

West Tulsa, Okla. **Blue Island, Ill.**

(Chicago Switching District)

CONSUMPTION HALTS CHICAGO DECLINE

Fifteen per Cent Larger Than for July Year Ago, but Reduction in Price Has Not Enlarged Demand. Kerosene Moving Freely. Fuel Oil Steady. Gas Oil Easy and Lubricants Dull. Tank Wagon Unchanged

By John B. Waldo

CHICAGO, July 28.—There have been numerous exciting rumors in the Chicago market during the week—and not much else. Consumption is evidently fairly large and this has stayed the decline that the brokers have been predicting and they have furnished the trade some amusement in watching their efforts to cover their short sales. A conservative estimate of the gasoline gallonage for the month at this time would be 15 per cent ahead of last July to date. It is very evident that the low prices at which the public can buy its motor fuel has not materially increased the sales of gasoline. There is no reason why it should. The city motorist may at the outside use 10 gallons a week and here he is saving 10 cents every seven days. He can save much more than that by smoking a pipe instead of cigars.

The refiners with marginal contracts have in all cases allowed their reduction to stand after the cut in its normal tank wagon by the Standard Oil Co. of Indiana so that the jobbers with marginal contracts now have a 2-cent decline from their first or original scale and this is bringing in the refiners a large business from their contract customers. The Taxman Co. states that deliveries on its contracts are running 200 cars a day or practically normal and others state their customers are taking their allotments without hesitation. This is probably true in the main. This fact accounts in some measure for the rather light demand for spot gasoline. The brokers sold for delivery at 8 cents figuring that with a tank wagon and crude decline the market would drop to 7 and that they would be able to cover at a nice profit but so far they have found very little Navy gasoline could be bought at less than 8 cents, and they have been trying their best to get prices down to 7¾ cents with small result to date. A little gasoline was to be had at that price but not enough. The report was that North Texas gasoline could be had at their figure and some refiners did quote that price for one day but the price was withdrawn and the present statement is that Navy gasoline is freely offered at 8 cents in all fields but that that price is practically the bottom.

Blends Largely Neglected

The demand is very largely for the New Navy grade in the spot market although the 450 end point can be applied on contracts. The price is so low that blends are neglected to a very great extent. The price wars that cover the territory have restricted the demand for the gravities testing higher than the New Navy grade and the demand is rather light for these with prices unsettled but easy. Natural gasoline has been less strongly held and is offered at lower prices.

Kerosene continues to move freely at established prices. The offerings are sufficient for the demand but not so large as to depress prices. There is a steady movement to the country but the export demand is apparently light. The outlook is considered favorable for a continuance of present prices as even a tank wagon decline of 1 cent which is all that is anticipated if there is any, would leave the jobber a handsome margin of profit.

Distillates for the oil burners are dead at present but there is a continuing demand for contracts for the winter beginning with September and running through March. The refiners as a rule are not making such contracts although some have done so.

Fuel Oil Steady

Fuel oil is moving steadily in small lots to buyers who will not purchase in excess of their requirements for immediate consumption. The present market is fairly firm with 75 cents the prevailing price for 24-26 fuel oil with no excess of sulphur.

Gas oil is a little easier. Some business has been placed at 2⅝ cents and possibly more could be done at that price. The users are getting 2¾ cents as their price and for some time the profit to the marketer was very small, in fact less than nothing as he sold at 2¾ cents in many cases and bought at that price occasionally booking an order at 3 cents. Some are still asking 3 cents but the bulk of the business done is at a little less figure. Supplies are larger as the purchasers for export have been shipped or at least collected and the refiners are in search of business, at their price.

Occasionally there is a call for a small quantity of road oil but these straggling orders amount to little and the refiners are shipping their contract orders and are anxious for the most part to clean out their stocks. Some are offering a fair quality of road oil at $1 a barrel.

Lubricants Dull

Lubricating oils are dull and easy. The demand for both motor and industrial lubricants is below expectations but this must be partly due to the method of purchasing which is for immediate needs and the keen competition. There are a good many more selling lubs and more refiners are refining them.

Tank wagon prices are nominally unchanged since the recent reduction by the Standard Oil Co. of Indiana of 1 cent from the normal market which means that over a large part of the territory the reduction did not apply. It is currently stated that there have been over 8,000 separate price cuts in this territory. The cutting seems to be spreading. The recent reduction by the Standard Oil Co. of Ohio though Ohio has not stopped the cutting there. The reduction of 2 cents was immediately followed in several important points by reductions by independent companies of a further 2 cents so that the situation is still described by oil men in Ohio as very bad. The station price at Burlington, Iowa, is down to 9 cents.

PIPE FOR ANDEAN LINE

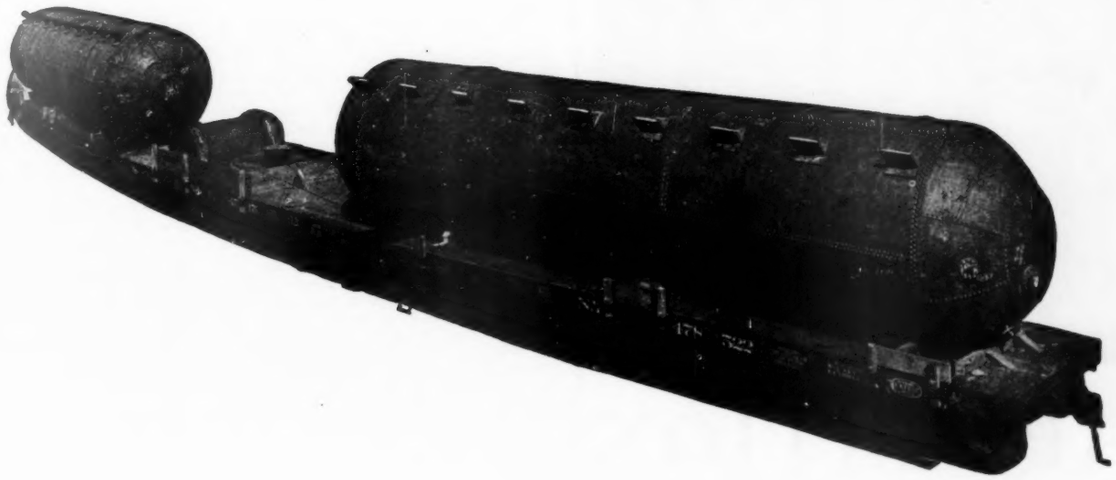
The Andean National Corp., which has a contract to construct a 500-mile pipe line in Colombia, South America, is said to be in the market for 365 miles of 10-inch pipe. The line, it is understood, will be erected for Standard Oil interests through subsidiary companies.

GAS METERS SLOW

Records covering tests of gas meters over a 20-year period show an average net error of one-tenth of 1 per cent slow, according to the Pennsylvania Public Service Information Committee. The number of meters tested was 2,022,481, owned by 23 gas companies in 16 states.

GAS FRANCHISE GRANTED

The Union Gas & Electric Co., a subsidiary of the Columbia Gas & Electric Co., has obtained a franchise to deliver natural gas to the city limits of Hamilton, Ohio, at 50 cents a thousand feet. The municipality will distribute the product, charging 75 cents a thousand.



Don't Think of P. I. W Only As Tank Builders

The Industry has come to depend so much on P. I. W. for big, field storage that it is apt to overlook an equally dependable riveted-up service.

Whether it's a station tank or a battery of high pressure stills—absorption towers, agitators, or condenser boxes—the P. I. W. hallmark, with all its significance in steel plate construction, will be there.

P.I.W. STEEL PLATE CONSTRUCTION

The same characteristics that have made P. I. W. 55's and 80's famous throughout the oil fields mark its smaller shop assembling.

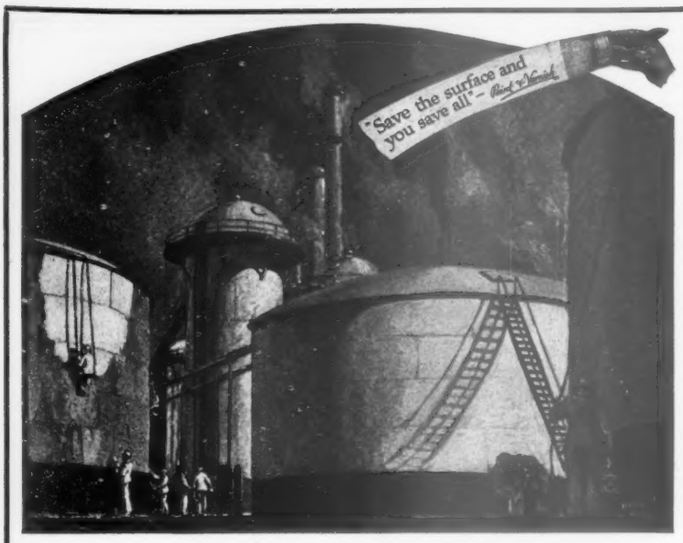
"P. I. W. Service Is World Wide"

The Petroleum Iron Works Company

Sharon, Pa.

Branch Plant, Kansas City, Kansas

New York St. Louis Tulsa Houston Casper San Francisco



EVAPORATION

Losses *Can* Be Stopped With

COOK'S GAS PROOF WHITE

The United States Bureau of Mines estimated that 1-30 of the gasoline production of the United States is lost every year from causes which can be prevented.

Improperly painted tanks cause enormous losses by evaporation. These losses can be stopped by painting these tanks with a white paint, such as Cook's Gas Proof White, which will reflect the rays of the sun and cut down the evaporation losses.

COOK'S Gas Proof White will not discolor. It stays white and will protect your tanks from the sun's rays and from rust and deterioration. This is a proven paint—a paint made up by our chemical engineers to do the very thing for which it is intended: That is, —to prevent evaporation losses—to protect your tanks from rusting—to stay white—and to LAST.

We specialize in the manufacture of paints for the Oil Industry. We have a booklet out describing these paints and color chips, showing the shades in which they are made. If you are interested in better refinery paints, drop us a line and we will mail you this booklet by return mail.

COOK PAINT & VARNISH CO.

Factories:

Kansas City Fort Worth

Branches:

Omaha Dallas
Wichita Oklahoma City
Denver

KANSAS FIELDS

(Continued From Page 50.)

E. Nelson, C SW SE NE, Section 30-33-3, and for No. 4 Wertman, C SE SW NE, same section; a rig was up for No. 4 Glasgow, C NE NW SW, and for No. 1 D. Johnson, C NW NE SE, same section.

The Trees Brothers' wildcat, No. 1 Urban NE cor. SE, Section 10-31-3, was shot with 10 quarts in sand at 3,042-54 feet, with total depth at 3,065 feet, and made 47 bbls afterward on the pump. The Arkansas Fuel Co. had a rig on the ground for an offset to this well, its No. 1 Clark, NW cor. SW, Section 11-31-3.

In Sumner County, the Champlin Refining Co. was drilling at 345 feet in No. 1 Craft, C NE SE, Section 17-30-1w, southwest of New Bedford.

In Chautauqua County, Page Brothers were drilling at 1,500 feet in No. 1 Green, NE cor. NW SE, Section 18-32-10, a south offset to the same interests' No. 1 Coleman, which created much excitement by flowing 1,000 bbls in 30 hours. Page Brothers and others' No. 1 Wiggins, SW cor. SE SE, Section 33-32-10, made 60 bbls. natural from sand at 1,636-43 feet. The Fisher Oil Co. had a rig on the ground for No. 1 Chamberlain, NW cor. SW SW, Section 11-33-10.

In old Marion County, the National Refining Co.'s No. 12, C SE SE, Section 17-21-4, was shut down with 1,400 feet of oil in the hole from sand at 2,419-20 feet. On the eastern line of the county, Chester Grow and others abandoned No. 1 Schroeder, NE cor. SW NW, Section 2-21-5, as dry at 2,510 feet. The Watchorn Oil & Gas Co.'s No. 37 Townsend, CSL NW SE, Section 5-22-4, was shut down at 2,480 feet.

East of Newton in Harvey County, Mason & Ralston's No. 2 Conway, CWL NW SE, Section 4-23-2 was good for 450 bbls from sand at 2,428-41 feet, total depth being in lime at 2,443 feet. Frank Wahn spudded and shut down No. 1-A Catz, NW cor. NE, Section 9-23-2.

The Shaffer Oil & Refining Co. was rigging up No. 1 Thompson, NW cor NE NW, Section 11-24-2.

In Butler County, Kightlinger and others abandoned No. 1 Beaumont, NW cor. SW NW, Section 17-24-5, as dry at 2,663 feet and had a rig up for No. 1 Joseph, NE cor. Section 18-24-5.

In southern Butler County, Martin & Gray were drilling at 2,925 feet in their old well, No. 1 Leverton, SE cor. NE, Section 31-29-7.

MISSOULA REFINING STARTS.

CASPER, WYO., July 26.—The Hart refinery at Missoula, Mont., has commenced operations. This is a small plant with a capacity of about 800 bbls. daily and the crude is shipped in from Cat Creek. Missoula lies on the west side of Montana in a region that has no oil production and the plant finds a ready market for all its product in the city and Bitter Root Valley. The plant started construction last winter and at present is running 8,000 gallons daily.

TO ENLARGE BRISTOW PLANT

The Lorraine Petroleum Co. of Tulsa is dismantling a skimming plant located at Walters, Okla., which it recently purchased from the Livingston Oil Corp. It has not been in operatioin for two or three years. The Lorraine Company is selling part of the material and moving part to Bristow, Okla., where it is being used to enlarge the company's plant located there.

MISSOURI OIL MEN'S BOOKLET

The Missouri Oil Men's Association has published an attractive booklet for distribution among motorists, giving many useful hints concerning lubrication and general care of an automobile. They are being distributed to the members of the association, together with wall and dindow display signs bearing the insignia of the association by George S. Allee, association secretary, Kansas City.

CALIFORNIA REFINERY STATISTICS FOR JUNE

Compiled by C. E. Steidl

Thirty-nine refineries reported to the United States Bureau of Mines as operating during June, with an aggregate daily indicated capacity of 566,670 bbls. of crude oil. These plants were operating at 75 per cent of their capacity, running to stills a daily average of 428,354 bbls. of crude oil.

Gasoline

Gasoline production during the month of June amounted to 109,567,063 gallons, a daily average of 3,652,235 gallons. This is a decrease of 5,293,051 gallons under May output. Compared with the same period of last year, a decrease of 5,749,656 gallons is noted. Stocks of gasoline continue to increase, and at the close of the month amounted to 276,959,482 gallons, which is an increase of 11,209,848 gallons over May stocks. Production of engine distillate decreased slightly to 7,212,424 gallons. Stocks of engine distillates show a decrease also, and at the close of June amounted to 6,217,040 gallons.

Kerosene

Kerosene output shows a decrease of 3,918,309 gallons under May production, the total production during June amounting to 20,108,017 gallons. Stocks also show a decrease of 6,006,694 gallons under May stocks. Stocks at the end of June were 32,420,967 gallons.

Gas and Fuel Oils

The production of gas and fuel oils was 369,933,790 gallons, a decrease during the month of 21,651,127 gallons. Stocks on June 30 were 810,013,658 gallons, showing a gain during the month amounting to 20,145,094 gallons.

Lubricants

The output of lubricants during June was 8,765,632 gallons, an increase over May production of 11,670,189 gallons.

Output of California Refineries for June 1924

Oils run to stills (bbls):	
Domestic crude	12,486,166
Unfinished oils rerun, net	208,773
Natural gas gasoline—run to stills or blended at refinery	155,671
Total oils run	12,850,614
Refined products—	
Gasoline, gallons	109,567,063
Engine distillate, gallons	7,212,424
Kerosene, gallons	20,108,017
Gas and fuel o'ls, gallons	369,933,790
Lubricants, gallons	8,765,632
Wax, pounds	3,623
Asphalt, tons	43,321
All other finished products, gal.	5,873,976
Unfinished oils produced, net, gallons	
Refinery losses, gallons	8,168,597
Stocks on Hand at the Refineries in California June 30, 1924	
Crude oil and unfinished products, bbls.:—	
Domestic crude	6,246,397
Unfinished oils	†12,255,329
Total oils to be run	18,504,726
Finished products—	
Gasoline, gallons	276,959,482
Engine distillate, gallons	6,217,040
Kerosene, gallons	32,420,967
Gas and fuel oils, gallons	810,013,658
Lubricants, gallons	15,923,159
Wax, pounds	4,050
Asphalt, tons	12,743
All other finished products, Gal.	498,000

*The net balance shows a net excess of unfinished oils run to stills over production.
†Includes 402,968,002 gallons of tops (crude naphtha) in storage.

PACIFIC GASOLINE PLANTS

TAFT, Cal., July 26.—The new gasoline plant of the Pacific Gasoline Co., near here, is expected to make a daily average production of 10,000 gallons. Construction is being rushed, with about 90 ment employed, and the plant is expected to be in operation by August 15. It will handle about 10,000,000 feet of gas. This company is building a plant of same capacity in the Elk Hills Field and is remodeling the works at Fellows by adding an absorption unit. These improvements are expected to bring the company an additional 10,000 gallons of gasoline, which will be both absorption and compression grades.

CITY TO SELL GASOLINE

The City of Chelsea, Mass., will open seven stations where gasoline will be sold at 16 cents a gallon, 4 cents cheaper than the pervailing price in Greater Boston. Mayor Quigley of Boston said he could buy an unlimited supply of gasoline for 14 cents a gallon.

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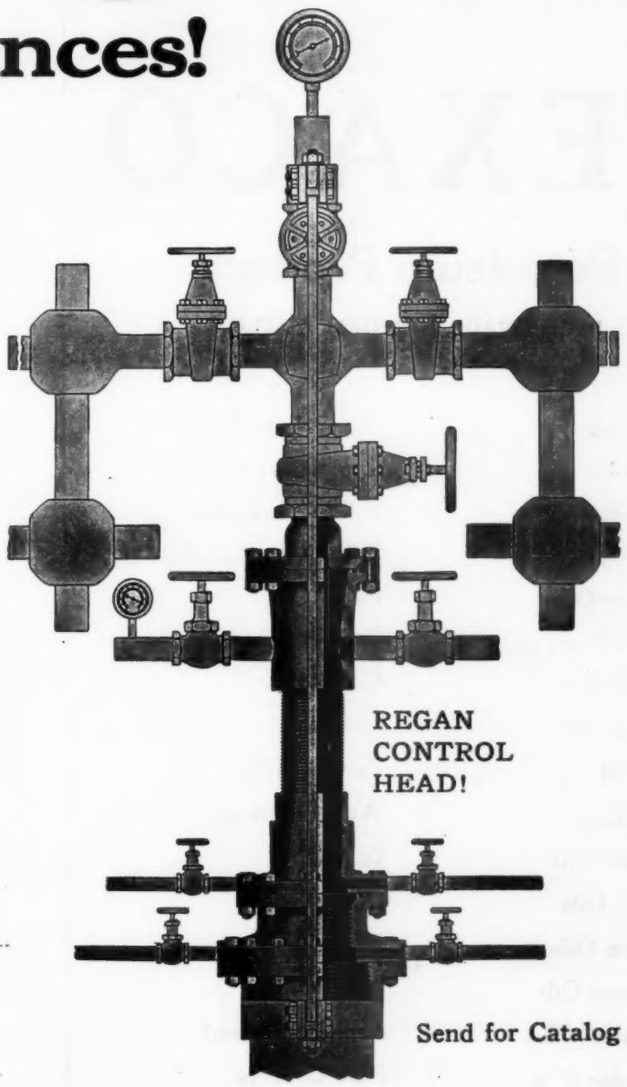

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GULF COAST

(Continued from Page 54)

the north side, completed at 3,100 feet started flowing 3,000 bbls 27 gravity oil.

The Texas Co.'s No. 26 Carroll was restored to production after it had been agitated and is flowing 2,500 bbls naturally. The Southern Petroleum Co.'s No. 37 Landslide, a worked over hole, is pumping 300 bbls. of salt water and some oil.

In the Goose Creek Pool, the Humble Oil & Refining Co.'s No. 5 Freeman, out in the bay, will make a pumper at 2,775 feet, as will the Southern Exploration Co.s No. 5 Wright at 2,380 feet. The Gulf Production Co.s No. 5 Chapman-Bryan is bailing at 4,300 feet and No. 26 Beaumont at 3,250 feet.

At Pierce Junction, the Gulf Production Co.'s No. 16 Taylor on the east side of the dome, blew, out at 3,365 feet throwing mud and rocks and flowing wild for two days. The hole now shows salt water.

In the Hull Pool

The outstanding feature of the week in the Hull Pool in Liberty County is the Mecom Co.'s No. 4 Mecom, deepened to 3,710 feet, where 37 feet of sand was found. The well started flowing 1,200 bbls, but increased to 2,500 bbls. before the end of the week. It is on the northwest side of the dome. The Humble Oil & Refining Co. abandoned No. 5 Marshall on the west side at 1,235 feet and No. 11 Hankamer on the northeast side, in salt water at 2,000 feet. The Gulf Petroleum Co.'s No. 23 Phoenix on the southeast, is flowing 2,000 bbls. after deepening to 2,300 feet. The same company's No. 10 Baldwin, on the south side, is making 500 bbls at 2,790 feet.

Operations in the pool are switching around to the south and southwest sides of the dome, where some big wells were developed during the early days of its history. The west and northwest sides appear to be defined with only inside locations to drill up. The bulk of the drilling for the past year has been on these two sides.

Orange Pool

In the Orange Pool, The Humble Oil & Refining Co.'s No. 10 Winifree is pumping 17 bbls. at 2,850 feet. The Orange Petroleum Co.'s No. 1 Berwick is pumping 30 bbls. at 3,325 feet, after a work over. The Rycade Petroleum Corp.'s No. 4 Kishi is making but 30 bbls of fluid, 50 per cent oil, at 3,060 feet. The Edgerly Petreleum Co.'s No. 2 Carbello is bailing at 3,320 feet. It was worked over. The Mutual Oil Co. is preparing to test five feet of sand in No. 13 Chesson at 4,235 feet. Fire destroyed the standard rig over the Gulf Production Co.'s No. 15 Hager. The oil took fire, but was soon smothered. The loss is estimated at $35,000.

Hardin County Pools

In the Baston Pool, the Kirby Petreleum Co.s No. 2 Hodges is pulling liner to drill deeper from 3,082 feet, where screen was set last week and the well flowed 3,000 bbls., 50 per cent oil, but soon sanded. The Duetser Oil Co.'s No 8 Trustee is pumping 25 bbls at 775 feet. The Gulf Production Co.'s No. 160 Wing is making 65 bbls on the beam at 1,350 feet. The Paraffin Oil Co.'s No. 57 Fee is bailing at 350 feet and the Ada Belle Oil Co.'s No. 77 at 325 feet.

In the Saratoga Pool, Paggi Oil Co.'s No. 42 Queen is a salt water hole at 1,350 feet.

In the Sour Lake Pool, Two Acre Oil Co.'s No. 1 Dornak bailed dry at 1,600 feet.

In the Spindletop Pool, the Unity Oil Co.'s No. 84 McFaddin is pumping 50 bbls. at 960 feet. John Wynne's No. 1 Sunshine is bailing at 910 feet.

South Louisiana Pools

In the Vinton Pool, the Gulf Refining Co.'s No. 50 G. N. G. will make a pumper at 2,475 feet. The Texas Co.'s No. 25 Gray is bailing at 2,150 feet. The Sun Oil Co. quit No. 2 Johnson in salt water at 2,850 feet.

In the Jennings Pool, F. I. Getty's No. 11 Chicago-Jennings is a 30-bbl. pumper at 1,845 feet. The Coastal Fuel Oil Co.'s No. 80 Feet is a 10-bbl. well at 1,650 feet, being worked over. The Fontenot Oil Co.'s No. 5 Fee got salt water at 1,900 feet.

The Vacuum Oil Co.'s No. 7, north of Lake Charles, a wildcat, is preparing to test 37 feet of sand and shale around 3,900 feet.

Luling Field

Two wells that widen the Luling Field a few locations on the Guadalupe County side and one that shows on the Caldwell County side, 1½ miles southeast of production, were the events of the week in that district. H. C. Thorman's No. 1 Harris, Guadlaupe County, northwest of production, is a 300-bbl. well. Casing has been set in No. 2 Harris. Back toward the San Marcos River, the United North and South Oil Co.'s No. 2 Roberts is credited with making 300 bbls with the bit one foot in the sand. The same company's No. 3 Shanklin, on the south side of the structure, Guadlaupe County, is showing heavy gas pressure. No. 1 Shanklin was one of the first wells drilled on that side of the river and was a water well. No. 2 came is as a good producer. The No. 2 Roberts is near the J. K. Hughes Dev. Co.'s No. 4 Allen, one of the best wells in the southwest extension of the field. Late in the week the Grayburg Oil Co.'s No. 9 Allen came in making 600 bbls.

On the Caldwell county side, or the old part of the field, the United North and South Oil Co.'s No. 7-A Mercer, is a 500-bbl. produced The derrick over No. 7 Halderman collapsed while it was drilled deeper. Solomon and associates' No. 1 Walker, formerly Big Gusher Oil Co, took over the hole and drilled it deeper from 2,000 to 2,440 feet. It is in a sand showing for a 10-bbl well. The gravity tests 40 degrees, compared with 27 and 28 in the field. The well is located 1½ miles southeast of production.

The National Petroleum Co. abandoned No. 1 Hensel, Guadalupe County, at 2,500 feet and C. C. Cannan quit No. 1 Forcey there at 2,500 feet. The latter drilled 80 feet into the Edwards lime, getting nothing.

Interesting tests now drilling on that side of the river include the Rydal Oil Co.'s No. 1 Jones, in which casing was set and cemented at 1,820 feet. It shows some gas. No. 1 Smith is drilling at 1,580 feet. The Grayburg Oil Co.'s No. 1 Weinert is at 1,575 feet. Burman and others' No. 1 Battles, around 780 feet and the Rycade Petroleum Corp.s No. 1 Meihofer below 2,888 feet. Howell Brothers' No. 1 Harris is at 1,485 feet. McClallan's No. 1 Winkler, south of Seguin, is drilling around 1,100 feet. Oklahoma parties have a derrick up for No. 1 McNeal, 2,000 feet from production. The Star State Oil Co. has a location for No. 1 and Pittman made a location for No. 1 Thomas.

The United North and South Co. has started a deep test near Prairie Lea, Caldwell County, northwest of production. The Midwest Texas Oil Co. drilled two dusters there during the early days of the field. The United North and South's No. 1 Tiller, southwest of production, is showing gas at 900 feet and No. 2 Tiller is drilling around 855 feet.

Gas Well on Fire

A report from Laredo stated the big gasser of the Cole Petroleum Co., near Bruni, Webb County, was burning. The gas ignited from a spark when workmen were trying to place a gate valve on the wild gasser. The men accidentally struck a pipe with a hammer, causing a spark that ignited the gas. Representatives of the Oil and Gas Division are now on the scene trying to extinguish the fire.

Laredo Districts

The event of the week in Webb County districts is the Cole Petroleum Co.'s No. 4 Bruni, estimated a 50,000,000-foot gas well at 1,700 feet. Its significance lies in its location, being 12 miles east of the Mirando City-Schott Pools and near the Duval County line. It is 10 miles southeast of the Caroline-Texas gas district, in which eight big gas wells are located. The company's No. 1, 2 and 3 each showed gas at 1,700, 2,150 and 3,300 feet, No. 3 drilling to 3,300 feet, but lost

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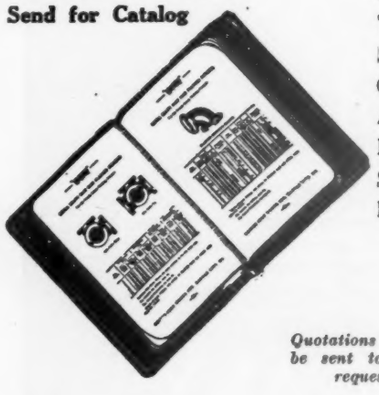

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on account of a fishing job. The company has made a location for No. 5 to test the sand at 2,150 feet. In the Aviator Pool, Dauchey & Bryant's No. 1 Albercas is rated a 5,000,000-foot gasser at 1,800 feet. Morgan & Gibble's No. 2, in the Caroline-Texas district, is estimated a 15,000,000-foot gasser at 2,074 feet. It is the eighth gasser there. The Border Gas Co., of which Dr. M. P. Cullinan is president is connected to the gassers in that district, distributing the product in Laredo and across the Rio Grande river in Neuvo Laredo.

In the Schott Pool, the Laredo Oil Co.'s No. 8 is drilling deeper to the 1,940-60 feet sand from 1,800 feet where it showed for a 25-bbl pumper. The Hagnolia Petroleum Co. is drilling in No. 12 Ochoa pasture. The company has 20 producers in various pools.

Indications are tank car shipments during July will be the greatest in the history of the pools. To July 19 a total of 600 cars had been loaded at Mirando City and it was expected 400 more will go forward before August 1. The Texpata Pipe Line Co. is making deliveries on the Sun Oil Co.'s contract calling for 950,000 bbls. To date approximately 150,000 bbls have been delivered. The crude is consigned to Marcus Hook, Philadelphia, two tankers being loaded at Gulf ports. The Texpata Pipe Line Co. continues to post 80 cents for Laredo crude and the Magnolia Petroleum Co. 75 cents.

The deepest hole to date in the southwest is the A. D. J. Syndicate's No. 2-B Pratt, west of Encinal and 26 miles northwest of Laredo, drilling below 4,470 feet.

CONDITIONS IN CALIFORNIA IMPROVING

(Continued from Page 36)

ary than during any other single month of the current year to date. May, with 150 new wells, lead the completion list, although the initial output of the 131 wells finished during March, 62,771 bbls., was the largest new production added. During the year to date there were 726 new rigs erected and 688 new wells brought in with an initial daily output of 290,078 bbls. During the same period last year there were 719 new rigs put up and 387 wells finished, with an aggregate initial output of 644,368 bbls. There was an average of 8,986 wells producing and 783 drilling during the first half of last year, as compared with 10,570 producing and 559 drilling during the corresponding period of 1924. The largest number of drilling wells in the Torrance Field is credited to the month of February, when 173 strings of tools were in one eration. May, with 78 new wells lead the completion list, although the highest initial daily production was recorded during March. The highest monthly production occurred during May, although the largest daily well production was made during December, 1923.

Long Beach Declining

Development work in the Long Beach Field has been on the decline for some time, although the number of completions during the first five months of this year were above the average. The initial production of new wells, however, has fallen off greatly. During 1922 the average initial production per well was 1,344 bbls. During 1923 this figure has increased to 1,825 but during the first six months of the current year the 131 new wells were only good for an average of 676 bbls. The highest daily well production since the field was opened up occurred during June of last year when the 196 wells producing at that time averaged 985 bbls. each. This condition was brought about by the discovery of the prolific deep sands. Since that time the average has been declining, the lowest point being reached during June of the current year, when the 450 producing wells averaged 354 bbls. each.

There is comparatively little new work being done in either the Huntington Beach or Santa Fe Springs fields and as a result production has become more or less stable. The daily well production at Santa Fe Springs, since reaching the high point of 2,193 bbls. during April, 1923, has declined to 182 bbls. per well during the past month, June. Huntington Beach registered the highest daily well production, 740 bbls. during April 1923 and the lowest, 170 bbls., since that time during June 1924. During the past six months Torrance, with 317 new wells good for 122,237 bbls., was far ahead of its nearest competitor, Long Beach, whose 131 new wells were good for 88,513 bbls. Following Torrance and Long Beach came Midway-Sunset with 87 new producers good for 23,715 bbls. and Santa Fe Springs with 66 new wells credited with an initial output of 19,618 bbls. There were only 27 completed at Huntington Beach with an aggregate initial production of 4,271 bbls. At Elk Hills there were only 21 new wells put on production but they were good for 9,370 bbls. Torrance, with 322, lead in the total number of new rigs erected, followed by Midway-Sunset with 142 and Long Beach with 42.

There were 111 wells abandoned in the Los Angeles-Salt Lake fields, an abnormal condition due to the plugging up of many holes to make way for real estate subdivisions. Long Beach showed 39 holes lost, Santa Fe Springs 23 and Coalinga 21. During the remaining six months of the current year production ment work in proven areas continue at about the present rate.

Gasoline Consumption

Production and consumption of gasoline in California during June were somewhat disappointing as both were smaller than during the previous month. July should show a substantial increase. The total gasoline output during the month was 116,779,487 gallons, an average of 3,892,649 gallons daily. Consumption totaled 105,647,148 gallons and averaged 3,521,571 gallons per day. Stocks increased 11,132,339 gallons, bringing the total storage on hand at the close of the month to 283,176,522 gallons. During the first six months of the current year to date 712,945,485 gallons of gasoline were produced, averaging 3,917,283 gallons daily. The average for the entire year of 1923 was only 3,515,617 gallons. Consumption during the first half of 1924 totaled 621,549,338 gallons, a daily average of 3,415,106 gallons, as compared with an average for the entire previous year of 3,262,428 gallons. The surplus accumulated between January 1, 1924, and June 30 was 91,396,147 gallons, as compared with a surplus during the entire year of 1923 of 92,413,975 gallons. It is expected that stocks will be drawn on during July, August and September. Kerosene production during June was down but consumption was up. This commodity is governed ot a large extent by export shipments and it therefore fluctuates to a large extent. Production during the month totaled 20,108,017 gallons and averaged 670,267 gallons daily, as compared with 775,043 gallons during the previous month. Consumption increased from 646,822 gallons during May to 870,490 gallons daily during June. Stocks decreased 6,006,694 gallons, leaving 22,420,967 gallons on hand at the close of the month. During the first half of 1924 production totaled 137,246,605 gallons, an average for the period of 754,102 gallons, considerably in excess of previouh figures. Consumption was also up, the total for the current period being 135,053,041 gallons, an average of 742,500 gallons daily.

PROHIBITS GAS FUEL

All public service companies affiliated with the Philadelphia Co. of Pittsburgh, Pa., have been instructed to arrange for the use of other fuel than natural gas for heating purposes. The action was taken officials say, in order to conserve the supply of natural gas for domestic consumers.

HUMBLE GROSS RECEIPTS TAX

AUSTIN, Tex., July 26.—The Humble Oil & Refining Co. has sent a gross receipts tax payment check for $182,691 to the State treasury, paying the tax on its production of 4,502,809 bbls of oil during the past quarter. Three other large oil companies are expected to send in more than $100,000 each.

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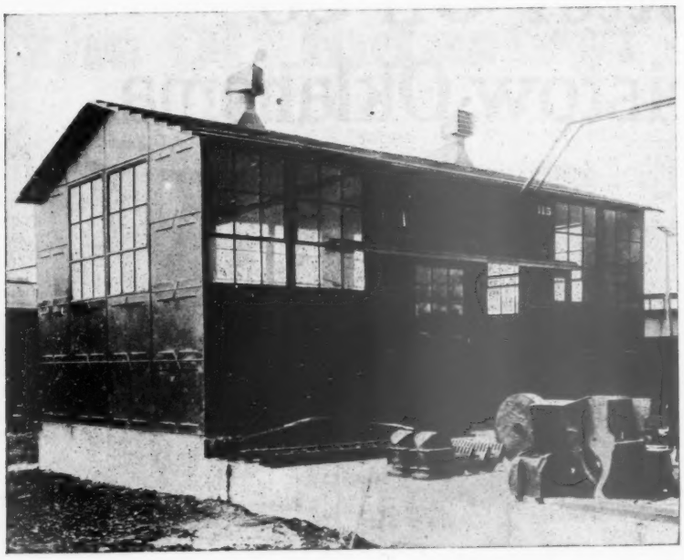

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CALIFORNIA FIELDS

(Continued from Page 48)

Oil Co.'s hole nearby has been recemented at 1,567 feet. The C. C. Stahl well at Downey has been shut down at 4,400 feet because of lack of finances and it is doubtful if any further work will be undertaken. The Beatty Oil Co. has temporarily suspended operations at 4,350 feet in its No. 1 Cowan at Eagle Rock. Neither the Pan American nor the Shell Oil Co. has encountered any oil showings in their tests at El Segundo and the outlook is not very promising. The Pan American is drilling ahead in No. 1 Pacific Southwest at 4,312 feet and the Shell Oil Co. is making hole in No. 1 Fortuna at 4,568 feet. A nearly abandonment is expected on No. 1 Goldschmidt of the Old Mission Oil Royalties at Fairview. A producing test made at 5,075 feet, after the well was plugged back from 5,570 feet, was unsuccessful. The Standard Oil Co. bailed a little oil from its well No. 2 on its Los Angeles Investment lease No. 1 at Inglewood from 1,008 feet. A string of 8¼-inch was landed at 1,005 feet and the test was made to determine whether a shut off had been secured. It is possible to bail about 10 bbls. of heavy oil from the well but so far no attempt has been made to put it on production. Well No. 1 on the same lease is standing suspended at 1,065 feet. Well No. 1 on Los Angeles Investment lease No. 2 is drilling ahead at 3,100 feet in a sandy shale. This well, together with No. 1 Los Angeles Extension at 4,720 feet, No. 1 Farrel at 4,100 feet and No. 1 Potter-Smith at 3,540 feet are being put down for a deep test. The Standard Oil Co. is spending considerable time and effort in proving up this area and, unless production is secured, about $1,000,000 will be charged to the company's profit and loss account.

At La Mirada, the Associated Oil Co. is drilling ahead at 2,100 feet in No. 1 McNally and the Petroleum Producers Syndicate is getting ready to make a production test at 5,005 feet. The Scientific Oil Co.'s well No. 1 remains suspended at 3,887 feet. The Petroleum Midway Co.'s No. 1 Neal at Carmenita, southeast of Norwalk, is drilling in a sandy shale at 5,400 feet. No oil showings or indications of any kind have been noted to date and the hole looks like a duster. The Olive Ventura Oil Co. shows 3,840 feet of hole in its Olive test, the formation being a red shale. In the San Jose Hills, the Bardeen Oil Co. in its second cement job secured a water shut off at 1,308 feet but it appears that the oil was shut off too. There are 1 or 2 feet of oil sand on this property, but because of the fact that the oil sand and water sand are together, no success has been attained by operators in this district in their efforts to secure commercial production. It is the intention of the Bardeen to drill deeper. The Rancho de La Puente Oil Co. has recovered from its recent fishing job and is now making hole at 2,900 feet. The Bingham & Stanton well is waiting for 6¼-inch casing at 3,065 feet. After being shut down for almost six months the Wucherer Gray Oil Co. has resumed operations on the Irvine Ranch in the San Joaquin Hills and is preparing to clean out well No. 1 now at 5,216 feet. The Standard Oil Co. has not yet spudded in No. 1 Culp Community at Los Nietos but is rigging up and setting the boilers. The Shell Oil Co. put No. 1 Bryant in the Seal Beach area on a production test during the week but the well made a good deal of salt water, which carried only slight traces of oil. Little importance is attached to the showing. Number 1 Bixby is drilling ahead in a sandy shale at 4,525 feet. The San Pedro Firmin Oil Co., drilling a test at the base of a cliff at Point Firmin, Los Anegeles Harbor, has reached a depth of 3,614 feet in its well No. 1. In Riverside County, the Beaumont Midway Syndicate is drilling ahead at 4,110 feet in a blue shale, while the Riggins Community Oil Association is standing cemented at 1,514 feet.

San Bernardino County

In San Bernardino County, the test well of the Victor Valley Land Owners is drilling in a sandstone at 1,467 feet. In Ventura County the Associated, General Petroleum and Shell Oil companies are all doing more or less development work. The Ring Oil Syndicate's test well, however, looks fairly good at 3,000 feet and, while an oil sand does not always result in commercial production, the well has prospects. E. J. Miley's No. 1 Mullholland is drilling ahead at 1,200 feet. In the Wheeler Ridge district, the Standard Oil Co. is carrying its well No. 3 down for a deep test and it is now drilling ahead at 4,010 feet. Number 9, the deep sand discovery well, has dropped to 250 bbls. daily. Number 11 is being prepared for a production test in the upper sand at 3,000 feet. The California Petroleum shows 4,312 feet in its well No. 1 but the Tejon Petroleum Co. (William G. McAdoo, Jr., and Associates) is still standing cemented at 3,214 feet. The Pan American Petroleum's well on the Kern River Bluffs, near Bakersfield, is drilling ahead at 2,412 feet. No oil sand has yet been picked up, although there are slight showings coming from the shales. In the Poso Creek district the Piper Oil Co. secured a fairly good looking oil sand in well No. 4 at 1,303 feet and drilling will continue in order that a test may be made for depth. The General Petroleum has reached 4,200 feet in its test well in the Kettlemen Hills and, although it was the intention of the company to test out the showings found last week, they were finally passed up.

CANADIAN FIELDS

(Continued from Page 56)

tour. Wainwright Oil Producers Syndicate, Section 36-44-7w4 is drilling.

It is unofficially reported that Imperial Oil, Ltd., is arranging to make a location on Section 18-45-5w4, near the southeast corner of Baxter Lake, in the Irma-Wainwright Field. The rotary outfit used for the Fabyan wells is being moved south for work in the Sweetgrass Field and it is improbable any further drilling will be undertaken by the Imperial in the Irma-Wainwright area this season.

Anglo-Alberta Oils, Ltd., has been incorporated under Dominion charter, with $250,000 capitalization and offices at Edmonton, Alta., to drill in the Irma-Wainwright Field.

In northern Alberta, Prairie Oils, Ltd., is reported to have resumed drilling at 1,500 feet on its test near High Prairie, which has been shut down waiting for casing.

The village of Grassy Lake, Alta., is arranging with the Canadian Western Natural Gas Co. of Calgary for a gas supply. Plans contemplate 3 miles of pipe line to connect with the new pipe line from the Foremost Field to the Bow Island main line. The Foremost-Bow Island line is now under construction.

TO RUN ON TAR OIL

The Ausburg works of the Munechen-Augsburg Engine Co. has just completed a large experimental double-acting two-stroke engine. In this machine an ordinary fixed cylinder is employed, the scavenging is effected by means of ports, so that in the center of the cylinder there are two rows of scavenging and two exhaust ports. In its general features the engine follows the lines of the 12,000 h. p. six-cylinder double-acting type built by the same firm during the war. An unusual form of cylinder cover is adopted, with a dividing horizontal wall, which allows the passage of cooling water at high speed over the hottest portion of the cover. The engine is designed to run on tar oil. Two separate series of pumps are provided, one for tar oil and the second for light ignition oil.

PETROLEUM SECTION MEETING

The Petroleum Section of the National Safety Council will convene in Louisville, Ky., September 30 and October 1 and 2 in connection with the thirteenth annual safety congress, which opens in the Brown Hotel there September 29 and continues until October 3, inclusive.

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THE Titusville Acme Steel Rotary has been proved by years of satisfactory service in every important Rotary field of the world. Among its many advantages are the replaceable race plates of machined high carbon steel with which both Rotary table and base are fitted. Cones are of case hardened machinery steel, and run in an oil bath. Pinion shaft is large in diameter with renewable bronze bushed oil bearings.

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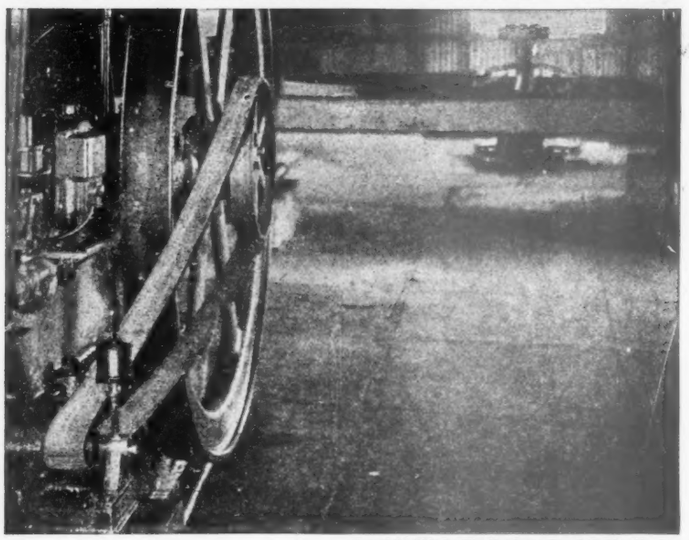
CONTINENTAL

GOODYEAR MEANS GOOD WEAR



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PUMP VALVES

SLUSH PUMP SLEEVES

SWAB RUBBERS

GOODYEAR

W. KENTUCKY-TENNESSEE

(Continued from Page 40)

drill it deeper. It showed only gas in the Modoc, about 80 feet below the Judio, but in the Cloyd sand, at 526 feet below the Judio, and about 550 feet below the Pencil Cave, pay was struck and continued to 623 feet, making 97 feet of sand, all of which, save a few inconsiderable streaks of shell here and there, were well saturated. The well would fill up about 200 feet with oil and made no salt water. The shot blew over 200 feet of 8-inch casing out of the hole and let in the fresh water, on account of which, it is not possible to say yet what the effect of such a heavy shot has been. Seemingly it has increased the oil in the hole 200 to 300 per cent. If this is a success the company will try the same tactics on No. 3, which is a pumper in the Cloyd sand, making about 10 bbls. a day.

Deep Test at Sulphur Creek

A deep test being watched with interest is the Kanawha Oil Co.'s well near Kettle Post Office, on Sulphur Creek. This test is on the Williams farm that produced a number of good wells 20 years ago and which has lately shown its ability to come back. The test is now down about 1,350 feet and the operators may see what is under the deep sand at 1,400 feet, which has been the deepest reached in this whole region, having been reached some five or six times in this county and twice within the past few years in Wayne County, the second county east of Cumberland, and which always shows oil and has one or two pumpers to its credit. This is perhaps the oldest sand, geologically speaking, producing anywhere in the world, as it is in the Cambrian. There may be other sands beneath it and it is hoped the Kanawha Company will explore a good stretch of the underlying rocks before they abandon the hole. The difference between the structural details of those older rocks and those of the surface rocks, or even the Pencil Cave, upon which all structural work has been done in this field, are so great that the surface structures cannot be used in exploration for oil in the deep formations; but if wells to them continue to be put down there will soon accumulate enough facts about them to enable the geologist to direct the subseuent explorations intelligently.

The Williams, Fanny's Creek and Brush Creek Pools are interesting examples of old pools coming back. The Brush Creek Pool was the first to try, beginning the recent development in this country four years ago by the Southern Oil & Refining Co.'s well on the Gilbert farm. This pool had had quite a development 20 years before, a refinery having been built in it, such gushers as the English well and the Raydure gasser making it famous at that time. Its recent development was short lived in the upper Sunnybrook sand, but in that time it produced a large amount of oil and would have made some money, in spite of the salt water with which the oil wells were saturating the field, had it not been overcapitalized and overdrilled because of its shallowness and the excitement. At the time it was not understood that other sands lay beneath that might be reached easily and which were not so exposed to the injury of the old wells. After taking out a considerable amount of oil the field was practically abandoned two years ago, but last season the Southern drilled one of its wells deeper and got another pay and this season it proposes to drill them all down to the Lower Sunnybrook and make some deeper tests. Others are looking forward to doing the same on their leases in that field as soon as the crude oil market improves.

Mississippi News

C. H. Stoll has taken over the test of the Middle States Oil Corp. near Carthage, in Leake County, Mississippi and has changed from cable to rotary tools. This test is down 300 feet.

The Jackson Oil Co.'s No. 2 Elton, in Hinds County, was shut down with a good showing at 1,682 feet, on account of lack of finance; 8-inch casing was set at 1,450 feet.

Trade Commission Admits Misleading Effect of Report

WASHINGTON, July 28.—The Federal Trade Commission has issued the following statement regarding the alleged identity of certain stockholders of The Texas Co., and various so-called Standard Oil Companies:

"The Texas Co., in its own journal, the Texaco Star, issue of May, 1924, charges that a report of the Federal Trade Commission, entitled 'Price of Gasoline in 1915,' published April 11, 1917, contained a statement that was misleading, namely, that stockholders of so-called Standard Oil Companies owned some 20 to 25 per cent of the shares of stock of The Texas Co.

"This complaint having come to the attention of the present members of this commission, an inquiry has been made into the matter. It appears that various oil companies, including The Texas Co., and several Standard companies, themselves furnished lists of their stockholders, at the request of the commission, and that a comparison of these lists of names showed that Texas Co. stock so reported was held in the proportion stated by persons who were similarly reported by Standard companies as holders of their stock. In other words, the statement complained of was accurate, according to reports made by the companies. It appears to th present members of this commission, however, that due consideration was not given to the fact that where the stockholders so reported were bankers or brokers, as was the case in a number of easily recognizable instances, such stock would be often, if not generally, held by such bankers or brokers in name only and for the benefit of their clients investing in or speculating in such stock.

"On the other hand, as to the alleged misleading tendency of the statement, namely, that it would suggest that the Standard interests controlled The Texas Co., it should be noted that the said report expressly classed and designated The Texas Co., as 'independent.'"

MEXICAN FIELDS

(Continued from Page 40)

is supposed to be finished at a subsea level of around 2,085 feet. These wells start off with a big head of oil, but they have a tendency to decline under exploitation.

Fields in General

Field operations in the Cacalilao sector of the Panuco Field during the past week are best described as follows: La Corona Petroleum Co.'s operations in Lot 4: No. 101, drilling in white lime at 1,985 feet; Nos. 106 and 108, cemented 8-inch in the San Felipe at 1,200 feet; No. 113, drilling in blue shale at 780 feet; No. 114, drilling in shale at 280 feet; No. 117, moving in, and Nos. 118, 119, 121 rigging. In Lot 1: No. 3 is drilling white lime at 1,985 feet; No. 99, drilling in gray lime at 1,705 feet; Nos. 102, 103, in gray lime at 1,685 and 1,880 feet respectively; No. 104 cemented 8-inch in the San Felipe at 1,085 feet; No. 105 cemented 6-inch in the same at 1,160 feet; Nos. 110, 111, 112 cemented 8-inch in the San Felipe at 1,150, 1,215 and 1,050 feet respectively. No. 116 is rigging and No. 122 moving in. International Petroleum Co.'s operations in Lots 4 and 5 follow: No. 56, drilling in gray lime at 1,780 feet; No. 59, drilling in white lime at 2,210 feet; No. 61, cemented 8-inch in the San Felipe at 1,202 feet; No. 79-A, drilling in gray shale at 1,700 feet; No. 88, drilling in the same formation at 2,025 feet; No. 81, drilling in gray lime at 1,935 feet; No. 82, cemented 10-inch in gray shale at 1,200 feet; No. 87, drilling in gray lime at 1,940 feet; No. 95, drilling in gray lime at 1,540 feet, showing by heads; No. 97, drilling in gray shale at 750 feet; No. 100, drilling in gray shale at 410 feet. Mexican Gulf Oil Co.'s No. 21, Lot 1, cemented 10-inch in the San Felipe at 1,125 feet. Mexican Sinclair Petroleum Corp.'s No. 68, Lot 2,

drilling in the San Felipe at 1,230 feet; No. 65, cemented 8-inch at 1,155 feet in the San Felipe; No. 73, at 1,240 feet. Mexican Petroleum Co.'s No. 10-A, Lot 1, drilling in lime at 2,007 feet; No. 17, same, cemented 8-inch in broken lime at 1,710 feet. Mexican Eagle Oil Co.'s No. 21, Lot 1, drilling in lime at 2,023 feet; Rich Mex Oil Co.'s No. 45, Lot 1, drilling in the San Felipe around 1,625 feet; Nos. 73 and 74, drilling in the same formation at 1,650 and 1,600 feet respectively. Transcontinental Petroleum Co.'s operations in Lot 4 follow: No. 7, drilling in lime at 1,925 feet; Nos. 94 and 111 cemented 8-inch in the San Felipe at 1,405 feet; No. 99, drilling in lime at 2,185 feet; No. 103, Lot 2, drilling in the San Felipe at 1,680 feet, and No. 115, same, running 10-inch at 1,300 feet; in Lot 5, No. 119 cemented 10-inch in shale at 850 feet.

Old Sectors

In the old sectors of the Panuco Field drilling is as follows: Credito Petrolero's No. 2, Lot 17, Loma y Llanos, is drilling in lime at 2,217 feet; East Coast Oil Co.'s No. 19, Estero Grande, making hole in brown gumbo at 160 feet; Ita Mex Oil Co.'s No. 12, Lot 25, Tamismolon, drilling in limey shale at 2,600 feet. Mexican Sinclair Petroleum Corp.'s No. 6 Zurita, drilling in shale at 540 feet. Panuco Boston Oil Co.'s No. 1, Lot 5, Isleta, drilling in shale at 810 feet; Williamson and others' No. 1, Lot 4, La Canoa (3-A) drilling in shale at 825 feet, and the second test, same (3-B) cemented 8-inch in the San Felipe at 1,570 feet.

South Fields

In the South Fields, Huasteca Petroleum Co.'s (Mexican Petroleum) No. 46 Cerro Azul, drilling in brown shale at 960 feet and No. 47 rigging. In Tierra Blanca, Huasteca's No. 24-A is drilling in brown shale at 1,018 feet; No. 29, drilling in the same formation at 420 feet; Nos. 30 and 31, rigging. In Tres Hermanos, No. 7 is moving in and No. 8 spudding in clay at 55 feet. Mexican Eagle Oil Co.'s No. 34, Lot 260 Amatlan, looks like a failure at 1,442 feet. This test was drilled to see if the upper stratum showings would prove of commercial value, but it appears not. The subsea level is 1,234 feet now and this is near the danger line in this particular part of the lot. It has been shut down for orders. The company's No. 24, in Lot 132 Amatlan, the deep test, is on the fish again at the old depth of 4,308 feet. Its No. 35-A, Lot 132, is preparing to cement 8-inch in a shell at 1,793 feet; No. 25, Lot 224 Amatlan, is drilling in hard shale at 700 feet; No. 26, Lot 226, same, drilling in gray lime at 2,220 feet. Penn-Mex Fuel Co.'s No. 3 Jardin, on the point of coming in and showing a lot of gas, is reported fishing at 2,260 feet, presumably in the San Felipe; No. 8 cemented 10-inch at 2,131 feet in a shell, and Nos. 9 and 11 are derricks. Agwi Companies are moving material for No. 26 Laguna de Tamiahua, near the middle of the lake. La Corona Petroleum Co.'s No. 1 San Isidro, drilling in gray shale at 3,700 feet, and No. 4-A, Lot 31, Zacamixtle, drilling in a similar formation at 1,850 feet. Cortez Oil Corp.'s No. 8 Aguadu, drilling in the San Felipe at 4,050 feet. International Petroleum Co.'s No. 22-A Toteco, drilling in brown shale at 3,463 feet and No. 44, same, drilling in a similar information at 1,747 feet.

Ebano and Miscellaneous

In the Ebano Pool, Mexican Petroleum Co.'s No. 26 Chijol is drilling in blue shale at 305 feet; No. 37 La Dicha, drilling in lime at 1,815 feet; No. 40, same, drilling in lime at 2,400 feet, and No. 41 has spudded.

In El Barco, Mexican Gulf Oil Co.'s No .32 is drilling in white and brown lime at 2,280 feet; No. 37, drilling in gray and brown lime at 1,650 feet; No. 52, drilling in gray lime with a small showing of oil at 1,065 feet. In the Salinas sector to the northeast, its No. 2 is drilling in gray shale at 830 feet; No. 5 cemented 10-inch in broken lime at 1,935 feet and No. 6 is drilling in gray shale at 1,432 feet. Kern Mex Oil Fields, Ltd., Nos. 6 and 7 El Barco are moving in, and No. 15, Las Palmas, is drilling in gray lime at 1,670 feet with a small show of gas and oil at 1,610 feet.

In the Salinas, Morrison and others' No. 2 Tortuga is drilling in gray shale at 1,200 feet; No. 16, drilling in the same formation at 480 feet, and No. 14 passed the spudding in stage.

In the Caracol, Venable and others' No. 1, Lot 21, shut down for fuel at 2,100 feet in the San Felipe; No. 1, Lot 73, is having trouble with a cave and is 80 feet off bottom at 1,620 feet, and No. 1, Lot 42, is drilling in the San Felipe at 1,818 feet.

In Tamaulipas, Mulcahey and others' No. 1 Manuel, is drilling in a hard gray lime at 2,343 feet. American International Fuel Co.'s No. 11 Esteros, is drilling in gray lime at 3,365 feet, and No. 14 is drilling in blue shale at 200 feet.

In Nuevo Leon, Agwi Companies' No. 21 Popote is drilling in gray lime at 1,650 feet.

In Corcovado, La Corona Petroleum Co.'s No. 1, Lot 6, is drilling in blue shale at 700 feet.

Topila

In the Topila Field, National Oil Co.'s No. 6, Lot 179 Quebrache, looks like a failure now. It was drilled 5 feet more (3,160 feet) and developed a larger showing of salt water in the white lime. It has been shut down for orders, but will probably be abandoned. This is also true of Cortez Oil Corp.'s No. 6, Lot 58 Lagartero, to the southwest of the National test, as its showing of oil has quit at 3,180 feet in white lime and chert. Credito Petrolero's No. 4, Lot 6 Paciencia de Aguacate is drilling in the San Felipe at 1,615 feet. Hicks and others' No. 11, same lot, is in the same formation at 1,720 feet.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended July 19 totaled 1,262,000 bbls., a daily average of 180,286 bbls., against 200,000 bbls., a daily average of 28,571 bbls. for the week ended July 12.

At Atlantic Coast Ports—	
Baltimore	95,000
Boston	70,000
New York	654,000
Philadelphia	374,000
Others	69,000
Total	1,262,000
Daily average	180,286
At Gulf Coast ports	None
Total Atlantic and Gulf Coast ports	1,262,000
Daily average	180,286

According to figures collected by the American Petroleum Institute imports of crude and refined oils at the principal ports for the week ended July 19 totaled 2,095,000 bbls., a daily average of 299,285 bbls., compared with 1,329,000 bbls., a daily average of 189,857 bbls. for the week ended July 12.

At Atlantic Coast Ports—	
Baltimore	207,000
Boston	.....
New York	704,000
Philadelphia	111,000
Others	312,000
Total	1,334,000
Daily average	190,571
At Gulf Coast Ports—	
Galveston district	339,000
New Orleans and Baton Rouge	255,000
Port Arthur and Sabine district	119,000
Tampa	48,000
Total	761,000
Daily average	108,714
At All U. S. Ports—	
Total	2,095,000
Daily average	299,285

ELK HILL LEASE TRIAL SET

LOS ANGELES, July 26.—Federal Judge Paul J. McCormick has set October 20 for trial of the Government's suit against Pan American Petroleum for cancellation of naval oil reserve leases in Elk Hill. Atlee Pomerene, special Government counsel, asked September 2 as the date, but on objection of the Doheny attorneys the latter date was fixed, They attorneys argued they were not prepared for so early a haring on so important case. Attorney Frank J. Hogan for the defense charged that testimony his clients would be forced to offer at the civil hearing would be used against them by Pomerene in criminal action in eastern courts.

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MINING AND REFINING OIL AT PECHELBRONN

Continued from Page 124)

manner as in America. It is first chilled in continuous chillers supplied with refrigeration by CO_2 machines. The congealed distillate is then pressed in filter presses operating on the same principle as those commonly employed in the United States, and not unlike them in appearance, except that the plates are square instead of being round. The pressed distillate is blended with the residue from the first hi-vac stills and the several grades of lubricating oils are taken off overhead from the second battery. The crude wax is sweated in pans of standard type, given a light acid treatment in a steam-jacketed agitator, neutralized, washed and blown with a little fine Fuller's earth which is subsequently removed from the finished wax by a small filter-press located directly beneath the wax agitator. From the residue of the second hi-vac battery asphalt and coke are produced in batches as desired and in the relative per cents given. Their asphalt is very brittle and they are experimenting with various methods for increasing its ductility without appreciably reducing its melting point. Their coke is extremely hard and flinty and is used solely for the manufacture of various types of electrodes.

Plant To Be Enlarged.

Plans are under way for enlarging the refinery to take care of the expected increase in production, in fact ground has already been broken for the new buildings. Included in this construction program is an American centrifugal de-waxing plant for the manufacture of bright-stock. Upon its completion, a part of the residue from the first hi-vac battery will be acid treated, thus producing a cylinder stock bottoms in the second hi-vac battery which will be de-waxed for bright stock in the high speed centrifuges.

Coal is employed as fuel for all operations at Pechelbroon, including the production of steam for refinery purposes. It is the grade known as "mine-run" in this country and comes from the valley of the river Saar in Germany. It costs but 10 francs per 100 kilos (about $5.50 per ton) delivered at the refinery, while it costs nearly 20 francs per 100 kilos to produce their fuel oil, for which they obtain yet a higher price on the French market. It therefore pays them to burn the coal, between five and six hundred tons of which are consumed per month.

The auxiliary equipment at this plant is excellent. Among other things they have an up-to-date testing and research laboratory and a semicommercial experimental plant. Here they try out every new process that appears to be at all interesting. Other secondary installations, such as boiler house, pump houses, shops, loading racks, barreling department, etc. are so similar to those found in nearly every American refinery as to render description unnecessary.

There is also a very comfortable club house where one is most hospitably received. An American oil man's trip to Europe, whether for business or pleasure, is certainly incomplete without a visit to this interesting oil field and refinery.

FULLER'S EARTH FACE PACKS

Beauty parlors are creating income for some of the largest oil companies. A use is developing for Fuller's earth in the manufacture of what is known as "face packs." Fuller's earth is the main ingredient of most of the mystic "beauty clays" being advertised. Among the various uses to which fullers earth has been extended in modern times, are several uses for certain laboratory tests; as a body for cheap grades of paints; as a carrier of basic colors for wall papers; as a substitute and filler for medicinal talcum powders, particularly the less expensive varieties; in mechanics' soaps; in metal polishes; and in past years for clarifying certain wines. It is also used in the preparation of high-grade sugars and syrups.

EASTERN FIELDS

Continued from Page 52)

on the W. S. English farm. W. S. Lauffer & Co. started to drill a second test on the Edward Cline farm.

In Newport Township, Washington County, O. S. Reckard & Co. have a duster in the Big Injun sand at a test on the H. L. Wick farm. In Section 2, Jefferson Township, Noble County, Robinson & Metcalf completed a light pumper in the Berea grit at a test on the S. A. Shafer farm. In Lawrence Township, Washington County, J. S. Archer & Co. lost the tools at a second test on the David Hendershot farm and have a plugged hole at 700 feet.

West Virginia

The best completion in the West Virginia fields during the week is the Hope Natural Gas Co.'s test on the Smith heirs' farm on Nutters Fork, West Union district, Doddridge County. When drilled through the Big Injun sand it showed for a 10-bbl. pumper. It was later given a shot and is good for 25 bbls. a day. On Red Lick Run, New Milton district, the Hope Construction & Refining Co. got a 10-bbl. pumper when it drilled No. 5 on the W. H. Douglass 80 acres, through the Big Injun sand. In Union district, C. A. Vanhorn & Co. have a gasser in the Big Injun sand at a test on the C. A. Vanhorn farm. On Beenson Run, 1,000 feet east of production, in Central district, local parties completed a test on the C. W. Williams farm, good for 10 bbls. a day in the Big Injun sand.

Haymond Farm Producer

The Premier Window Glass Co.'s No. 3, on the Minerva Haymond farm, completed two weeks ago, in Clay district, Ritchie County, is producing 50 bbls. a day from the Maxon sand. In Union district, Elder & Straley have a duster in the Big Injun sand at a test on the A. J. Sheets farm. In the same district, the Carnegie Natural Gas Co. completed to a total depth of 2,610 feet, its test on the I. D. Good farm. It is dry in all sands. The Hope Natural Gas Co. drilled its old No. 1 on the R. C. McDonald farm, in Union district, Harrison County, from the fifth to the Speechley sand, a total depth of 2,986 feet. It is a gasser, spraying some oil. On Jakes Run, Clay district, Monongalia County, the Carnegie Natural Gas Co. completed and shot in the Big Injun sand a test on the Simon L. Moore farm. It filled up with fluid and will make a producer. In Washington district, Jackson County, a home company completed a test on the E. C. Board farm. It is a duster in all sands.

Wildcat Duster in Cabell County

On Lower Creek, Grant district, Cabell County, 6 miles north of production, C. O. Nixon & Co. completed their test on the F. J. Templeton farm. It is dry in all sands, including the Gordon. On Charley's Creek, in the same district, the Midway City Gas Co. completed and shot in the Berea grit a test on the Charles Harkour farm. It is a light gasser. The Harshbarger Oil & Gas Co. has started to drill on the W. G. Johnson farm and the Monickel Gas Co. is drilling a test on the Lemuel Rucker farm, 4 miles southwest of Beckett. In Freeman's Creek district, Lewis County, the Reserve Gas Co. got a light gasser in the fifth sand at its test on the P. T. Barb farm. The U. S. Stamping Co. completed a test on the Phillip Markey farm on Little Grove Creek, Marshall County, good for 10 bbls. a day in the Big Injun sand. On a part of the same farm, the Decem Development Co. has moved a drilling machine to a location. In Burning Springs district, Wirt County, O. E. Grow has a duster in the second Cow Run sand at No. 17, on the Rose White Cotton farm. In the same district, L. E. Shuck & Co. got a light pumper in the first Cow Run sand when they completed and shot No. 9 on the W. H. H. Wheaton farm.

Gassers in Lincoln County

In Carroll district, Lincoln County, the Columbia Gas Co. has a gasser on the George Stowers farm. C. C. Wolf has one on the Woodall-Yager farm. The Roy Oil & Gas Co. and King & Kingrey each completed gassers. In Union district, the Laurel Development Co. got a Big Injun gasser on the A. E. Dick farm. In Grant district, Harrison County, the Hope Natural Gas Co.'s test on the E. H. Stout farm is a gasser in the fifth sand. In Geary district, Roane County, the United Fuel Gas Co.'s test on the John M. Baker farm is a light gasser on the Big Injun sand. In Walton district, the same company's test on the Cinderella Holbert farm is a gasser in the same formation. The Carnegie Natural Gas Co.'s test on the D. D. Henderson farm, in Clay district, Wetzel County, is a light pumper in the Gordon sand.

Drilling and Starting Tests

In Court House district, Lewis County, Carl Wahinc & Co. have a rig completed on the J. P. Cole farm. On Indian Creek, Murphy district, the Cairo Oil Co. has started to drill on the B. F. Prince farm. In Union district, Ritchie County, the Hope Natural Gas Co. has rig completed on the C. A. Mason farm. In Union district, D. M. Heckert & Co. have a rig up on the J. F. Somerville farm. In Grant district, the Hope Construction & Refining Co. has a rig up on the Omer H. King farm. In DeKalb district, Gilmer County, the same company has a rig completed on the G. C. Fisher farm. In Henry district, Clay County, the United Fuel Gas Co. has started to drill on the Decker Jarvis farm. In Clay district, Monongalia County, the Marshall Oil Co. started to drill to the lower sands in old No. 5 on the Minor Tennant farm. On Jakes Run, Clay district, Monongalia County, the Carnegie Natural Gas Co. is drilling on the N. A. Moore farm. In Southwest district, Doddridge County, Zinn Broadwater has a rig up on the Sarah D. Scott farm. In Jefferson district, Pleasants County, W. H. Noland & Co. started to drill on the S. P. Allen farm. In the same district, Brader, Spear & Depew are drilling on the D. R. Westbrook farm.

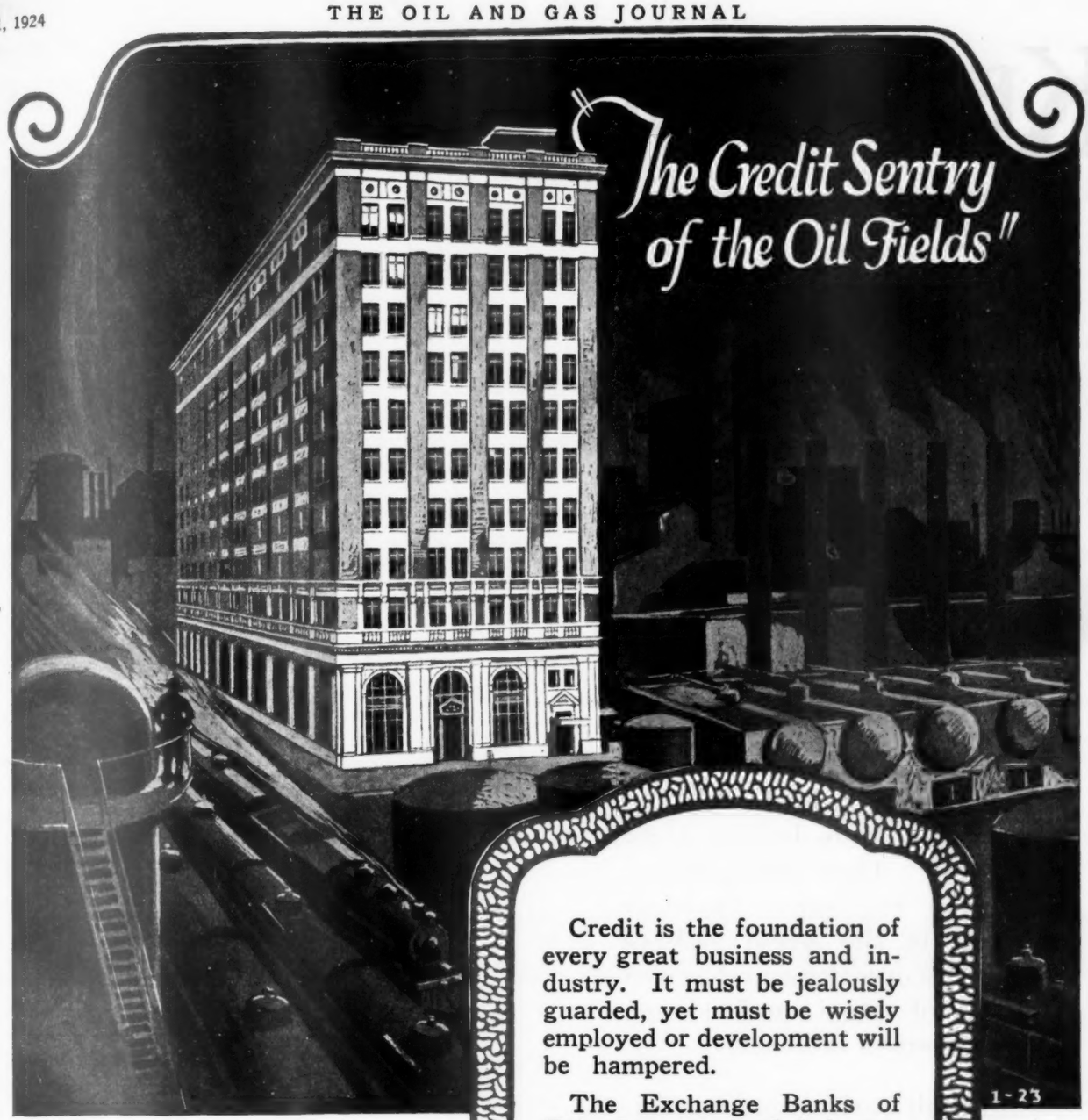
On Nutters Fork, Union district, Doddridge County, D. W. Nutter completed and shot in the Squaw sand a test on the Kinney heirs' farm, not good for more than 5 bbls. a day. In Walker district, Wood County, G. L. Watson's test on his own farm is a duster in the salt sand. J. E. Trainer's test on the Anderson Perine farm in New Milton district, Doddridge County, is a gasser in the Big Injun sand.

Pumpers in Marshall County

On Fish Creek, Liberty district, Marshall County, the Carnegie Natural Gas Co. drilled its test on the C. F. Yater farm through the Gordon sand and showing for a 25-bbl. producer. In the same locality, the Hope Construction & Refining Co.'s No. 3 on the I. G. Logsdon farm is good for 15 bbls. a day in the same formation. On Sheeps Run, Grant district, Ritchie County, H. P. McGinnis & Co.'s second test on the J. B. Markey farm, is a 5-bbl. pumper in the salt sand. Located about 1,500 feet in advance of production Lafayette district, Pleasants County, Neely & Co.'s second test on the Lamp farm is good for 5 bbls. a day in the Maxon sand. On Yellow Creek, Sheridan district, Calhoun County, the Chemical Oil & Gas Co. has the rig completed for a test on the A. H. Jackson farm.

Southern Pennsylvania.

For the first time in a number of weeks, Beaver County has some completions. In Chippewa Township, the Edwards Oil Co.'s No. 7 on the Elmer E. McDevitt farm is a very light pumper. In the same township, the George Freshwater Oil & Gas Co. got one of the same kind at a second test on the A. McHaffie farm. In Green Township, the Service Creek Oil & Gas Co. has a dry hole at No. 9 on the A. M. Covert farm. In Richill Township, Greene County, the Carnegie Natural Gas Co.'s test on the J. Parson and S. Taylor farms are gassers in the Gordon sand. In Perry Township, the Martin Oil & Gas Co.'s test on the Jarrett Fox farm is a gasser in the Pittsburgh coal measure. In the same township, the Fox Oil & Gas Co. has a small gasser in the Big Injun sand on the Charles Lemley farm. In Dunkard Township, Jesse L. Garard completed No. 29 on the D. Garrison farm, dry in the Dunkard sand.



Credit is the foundation of every great business and industry. It must be jealously guarded, yet must be wisely employed or development will be hampered.

The Exchange Banks of Tulsa have attained their pre-eminence because of personal knowledge of the oil industry possessed by the directors, who are themselves practical oil men.

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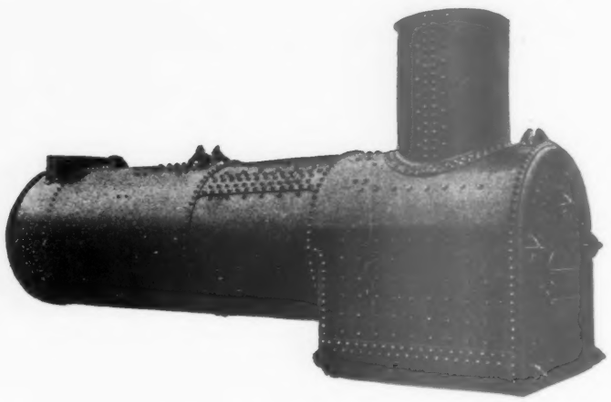

You cannot build huskier or more dependable boilers than Kewanee. They are put together in the same faultless manner as the great boilers used in locomotives and ocean liners — of steel and rivets. Their strength is *known.*

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CALIFORNIA CRUDE AND REFINED MARKET STATUS

(Continued from Page 38)

to 200,000 barrels per day, the balance between consumption and production on the Pacific Coast will not be reached until the summer or autumn of 1925. It may be argued that it is not absolutely essential that production and consumption on the Pacific Coast must balance in order to allow California to break away from the Eastern price structure, because California marketers would be inclined to store any reasonabiy small excess production rather than sell it on the Atlantic Coast or in Europe at low prices in competition with Mid-Continent or Eastern oil. The answer to that is that California marketers are pretty sick of storing oil and if there is any profit at all to be made by selling in the eastern market they would rather do that than to put a single unnecessary barrel of oil into storage. This is evident when one considers that the 115,000,000 barrels of oil now stored in California constitutes a 230 days supply if the daily consumption is figured at 500,000 barrels per day (50,000 barrels in excess of the present consumption in the normal market.)

The California market is, therefore, an integral part of the oil market of the entire United States. In the immediate future at least its ruling prices will be those of the Atlantic and Gulf Coast shipping centers less the cost of transportation through the canal.

Gasoline and Fuel Oil Markets.

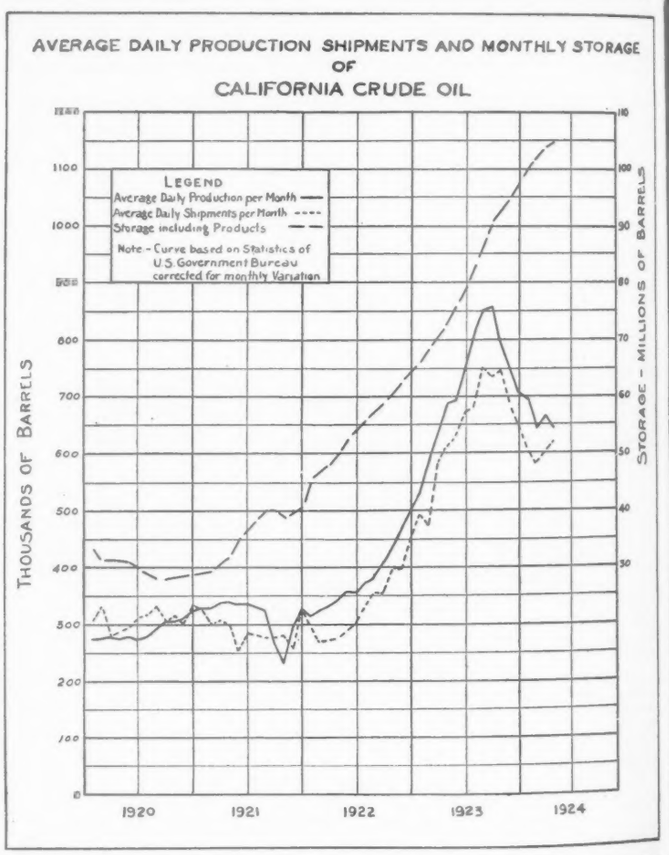
Up until a few years ago fuel oil was almost a drug on the California market. Refiners experienced no difficulty in disposing of their gasoline and of a fair share of their kerosene, lubricants and slop distillates. However, when it came to fuel oil, the disposition of this product was so difficult at times that many refining companies, particularly the smaller ones, frequently figured their manufacturing costs, when considering a new crude supply, on the basis of stripping off the gasoline and a little kerosene distillate and throwing the residuum away. Not that any of it was actually thrown away, but the nuisance of storing it and the low price received for it just about offset one another under average marketing conditions.

Now conditions are almost reversed. Fuel oil is far and away the strongest petroleum product on the Pacific Coast. During all the weakness of the past few months in the general oil market fuel oil has held its price of $1.40 per barrel at tidewater. There is no sign of weakening apparent.

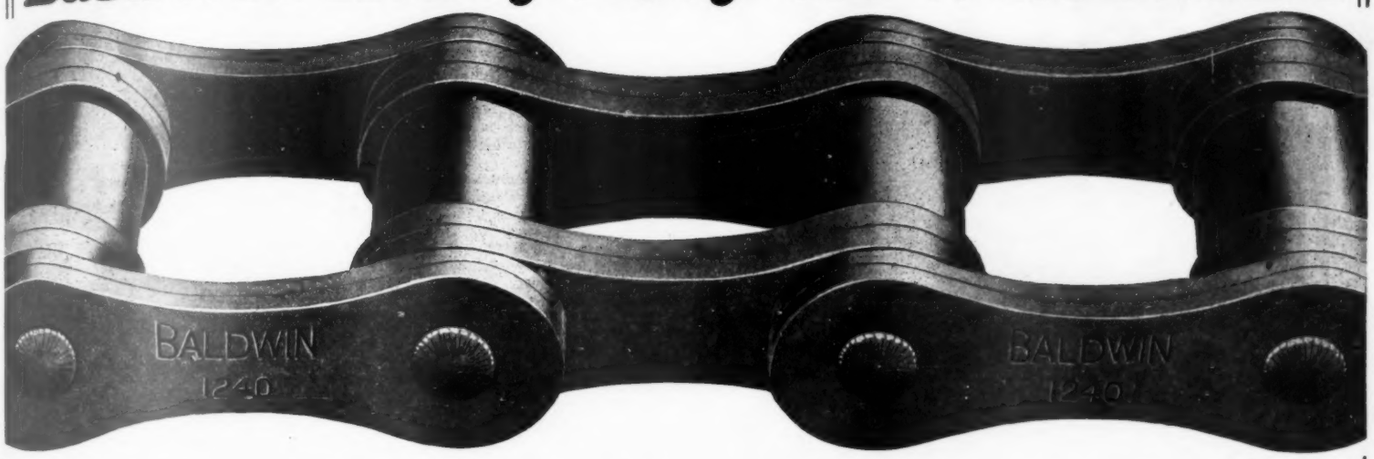
One reason for this situation is that the demand for fuel oil has greatly increased of late and, curiously enough, with minor exceptions all the new fields discovered in California have been light oil fields. Consequently, the proportionate increase of fuel crude production is not in line with the greatly increased demand for the product. Even when one considers the large amount of oil stored in California, th bulk of it is high gravity crude with an exceptionally large gasoline content and another large proportion of it is tops containing approximately 85 percent Navy Gasoline. Heavy crude and residuum stocks have not increased much in California. All of this would seem to indicate that the fuel oil market on the Pacific Coast will be strong for as far ahead as we can see.

Another factor warrants consideration in any discussion of fuel oil. That is cracking. It is reliably estimated that fully thirty percent of the gasoline now marketed in the United States is produced by cracking. Now whether it is fuel oil which is cracked or whether it is gas oil or some lighter distillate makes little difference. As far as the oil market is concerned it is fuel oil which will reflect the increased or lessened demand. All indications point to increased cracking operations in the United States. This means an increased demand for fuel oil or distillates which would be turned back into fuel oil.

Conversely the gasoline price scale is now limited largely by the cost of cracking heavy distillates or fuel oil into synthetic gasoline. It is, therefore, very unlikely that the bonanza prices which have at times in the past been received for gasoline will ever come again. This is assuming, of course, that for some years to come we will have sufficient fuel oil to crack.



Baldwin Heavy Duty Oil Well Chains



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Bulletin No. 28 illustrates the Oil Well Type.
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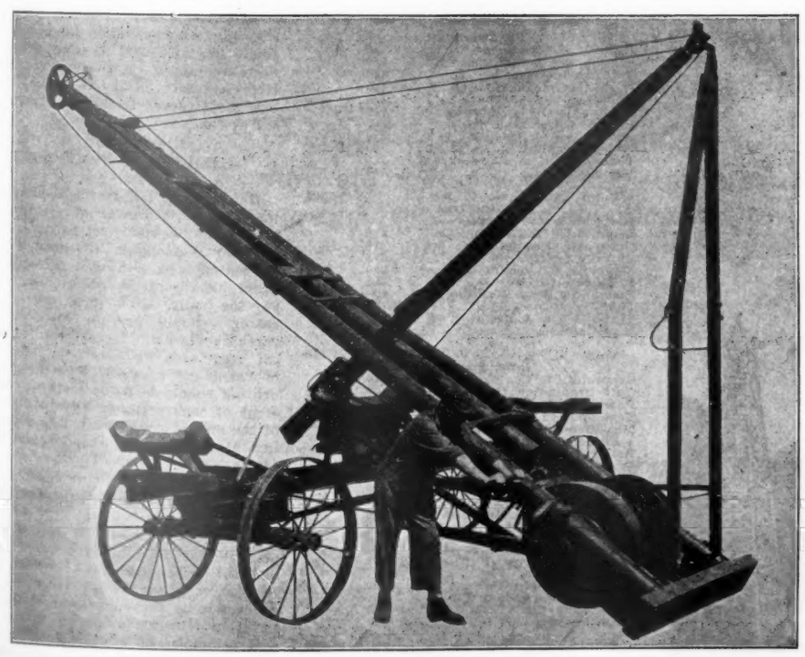
LOTS OF ROOM ALOFT



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The first position at 26½ feet should be used for pulling casing or other extra heavy loads, for tubing the second position at 35 feet, while for rods or other light pulls the mast should be fully extended to its full height of 40 feet.

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Bradner, Ohio

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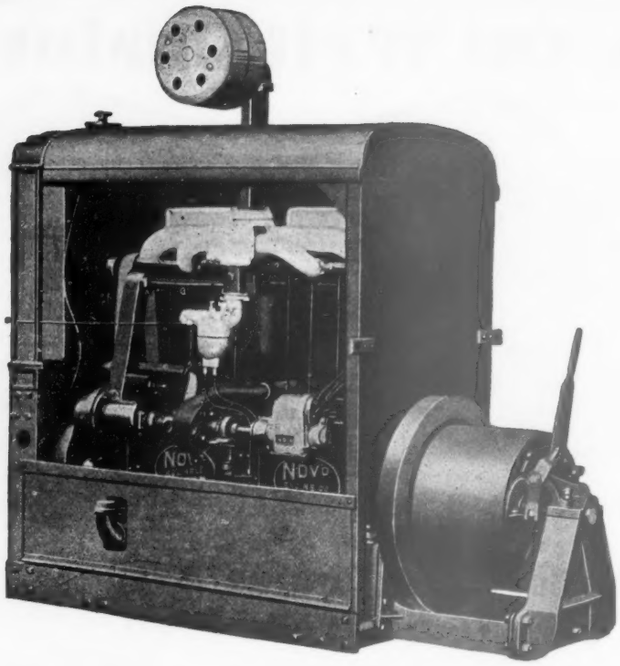

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There's a Novo Product that will meet your power requirements. Give it a trial and 1925 will find you a willing booster for Novo equipment. We will welcome your inquiry.

Novo Gasoline Engines—one, two and four cylinder—are made for every power requirement up to 40 H. P. Novo pumps, hoists and compressors are available in many types, sizes and capacities for users who demand Novo reliability in outfits as well as engines.

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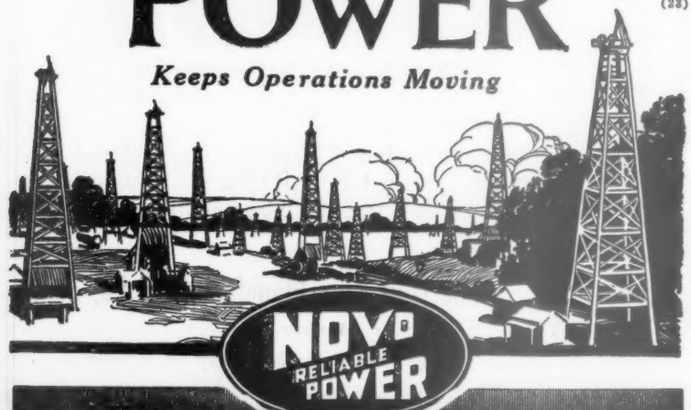

NORTH CENTRAL TEXAS

(Continued from Page 44)

and others' No. 1 Massey, drilling at 1,200 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Harris, drilling at 2,835 feet: World Oil Co.'s No. 1 Powell, fishing job at 840 feet.

Reagan County—Drilling: Big Lake Oil Co.'s No. 5 University land, fishing for Swab at 2,970 feet; No. 11 University, set 8¼-inch casing at 2,660 feet; Wrightsman and others' No. 1 Ingham, spudding.

Shackford County—Drilling: Cerf and others' No. 1 Poindexter, underreaming 10-inch casing at 1,740 feet; Humble Oil & Refining Co.'s No. 1 Miles, drilling in gray lime at 3,445 feet; Kellogg and others' No. 1 Sedwick, underreaming casing at 2,500 feet; Magnolia Petroleum Co.'s No. 3 George, drilling by tools at 3,490 feet; Miller and others' No. 2 Boyett, showing some gas and drilling in gray lime at 3,510 feet.

Michell County—Drilling: Eddleman and others' No. 1 Gist, drilling, with hole full of water at 1,140 feet; Haines and others' No. 1 Brown drilling at 250 feet; California Co.'s No. 1 Morrison fishing at 5,305 feet; No. 4 Miller, drilling at 2,805 feet; No. 8 Morrison, testing casing at 2,806 feet; No. 9 Morrison, drilling at 2,675 feet; No. 10 Morrison, at 1,630 feet; No. 11 Morrison, at 2,605 feet; No. 6 Abrams, at 1,175 feet; Sloan and others' No. 2 Miller, at 1,260 feet.

Brown County—Completions: Gillman and others' No. 1 Newton, 100 bbls. at 1,255 feet.

Drilling: Avery and others' No. 3 Cox, drilling at 660 feet; Carlton and others' No. 1 Fombey, drilling in shale at 2,430 feet; Gump and others' No. 1 Moore, drilling at 850 feet; Mahlsted & Mook's No. 1 Gaines, drilling at 400 feet; No. 1 Gafford, drilling at 120 feet; Omaha Southern Oil Co.'s No. 2 Gaines, cleaning out at 1,690 feet; Simms Oil Co.'s No. 1 Gaines, drilling at 375 feet.

Comanche County—Completions: Kirk & Brewer's No. 1 Sloan, 10 bbls. at 2,770 feet.

Drilling: Ghormely and others' No. 1 Morrison, drilling at 200 feet; Poe & Wilson's No. 1 Johnson, drilling in lime at 2,250 feet; Scott and others' No. 1 Martin, drilling in hard rock at 3,370 feet.

Palo Pinto County—Drilling: Upham Gas Co.'s No. 1 Bradford, drilling at 640 feet; Manning and others' No. 1 Hitson, cleaning out at 3,640 feet; Strawn Coal Co.'s No. 1 Strawn, drilling in rock at 2,920 feet.

Production Report
Week Ending July 24, 1924

Burkburnett		
Barkley & Meadows	1,150	
Humble Oil & Refining Co.	510	
Gulf Production Co.	960	
Magnolia Petroleum Co.	3,245	
McMahon Oil Co.	425	
Panhandle Oil & Refining Co.	410	
Prairie Oil & Gas Co.	15	
Sinclair Oil & Gas Co.	60	
The Texas Co.	595	
Texhoma Oil & Refining Co.	475	
Miscellaneous	11,320	
Total		19,165
Electra		
Empire Gas & Fuel Co.	1,320	
Humble Oil & Refining Co.	270	
Griswold Oil Co.	220	
Gulf Production Co.	1,065	
Magnolia Petroleum Co.	4,390	
McMahon Oil Co.	250	
Panhandle Oil & Refining Co.	100	
The Texas Co.	4,460	
Texhoma Oil & Refining Co.	2,040	
Miscellaneous	7,835	
Total		21,460
Iowa Park, Etc.		
Griswold Oil Co.	20	
Gulf Production Co.	40	
Panhandle Oil & Refining Co.	255	
Texhoma Oil & Refining Co.	80	
Miscellaneous	4,550	
Archer County—		
Empire Gas & Fuel Co.	1,450	
Griswold Oil Co.	884	
Gulf Production Co.	335	
Humble Oil & Refining Co.	180	
Magnolia Petroleum Co.	155	
Panhandle Oil & Refining Co.	120	
Prairie Oil & Gas Co.	1,855	
The Texas Co.	565	
Texhoma Oil & Refining Co.	3,790	
Miscellaneous	22,105	
Petrolia—		
Gulf Production Co.	60	
Magnolia Petroleum Co.	30	
The Texas Co.	80	
Miscellaneous	170	
Total		35,724
Stephens County		
Empire Gas & Fuel Co.	100	
Gulf Production Co.	1,435	
Humble Oil & Refinnig Co.	1,295	
Magnolia Petroleum Co.	705	
Mid-Kansas Oil & Gas Co.	1,915	
Prairie Oil & Gas Co.	770	
Sinclair Oil Co.	155	
The Sun Co.	840	
Texas Pacific Coal & Oil Co.	3,250	
Miscellaneous	1,340	
	8,560	
Total		19,965
Eastland County		
Gulf Production Co.	445	
Humble Oil & Refining Co.	160	
Magnolia Petroleum Co.	530	
Panhandle Oil & Refining Co.	460	
Prairie Oil & Gas Co.	700	
Sinclair Oil & Gas Co.	550	
The Texas Co.	420	
Texas Pacific Coal & Oil Co.	850	
Miscellaneous	2,890	
Total		6,945
Other Fields		
Strawn—		
Texas Pacific Coal & Oil Co.	325	
Miscellaneous	435	
Moran—		
Empire Gas & Fuel Co.	95	
Humble Oil & Refining Co.	435	
The Texas Co.	165	
Texhoma Oil & Refining Co.	175	
Miscellaneous	2,700	
Coleman County—		
Miscellaneous	140	
Brown County—		
Miscellaneous	450	
Comanche-Eastland—		
Humble Oil & Refining Co.	215	
Magnolia Petroleum Co.	1,100	
Prairie Oil & Gas Co.	200	
Sinclair Oil & Gas Co.	60	
The Texas Co.	225	
Texas Pacific Coal & Oil Co.	160	
Miscellaneous	4,720	
Young County—		
Gulf Production Co.	90	
Sinclair Oil & Gas Co.	490	
Panhandle Oil & Refining Co.	290	
The Texas Co.	75	
Miscellaneous	3,300	
Mitchell County	1,300	
Reagan County	3,355	
Jack County	30	
Scurry County	60	
Carson County	415	
Hutchinson County	55	
Total		21,660
Total this week		123,469
Total last week		123,135
Gain		334

HOLD OIL HEARING ON DRY PINEY FIELD

A hearing on a petition of the Utah Oil Refining Co. and the Cretaceous Oil Co. for a redesignation of the Dry Piney Field in Wyoming was held July 28 by the Interior Department.

The Dry Piney Field is part of the public domain and two years ago was designated by the Geological Survey of the Interior Department as a producing oil structure and therefore not subject to the filing of mineral prospecting claims.

Both the Utah Oil Refining Co. and the Cretaceous Oil Co. have been drilling on the land included in the field and protested against the designation, requesting its cancellation on the ground that none of the wells they had sunk had produced oil.

Their requests were denied after which they filed an application for further consideration and oral hearing before the Secretary of the Interior on the question. Representatives of the Geological Survey and the General Land Office were present at the hearing.

GEOLIGISTS JOKE TODD

Referring to Dr. David Todd's suggestion that withdrawal of oil from the ground may produce earthquakes, oil experts at Washington who know Todd as an astronomer, not as a geologist, discount his theory on two grounds. They say the many thousands of steel oil well casings should operate to stiffen the earth's surface and strengthen the geological structures and that the release of enormous gas pressures as a result of oil drilling should help the earth as confinement of such pressure below the surface of the ground could not but be a disturbing element rather than a stabilizing factor.

SHALE RESIDUE FOR BRICK

One of the difficulties of the distillation of shale for the production of oil is the disposal of the residues. It would seem that a very promising process in this connection is the conversion of the material into bricks, according to the general principles of what is known as the sand-lime or calcium-silicate method. Shale residues closely resemble in chemical composition blast furnace slag or boiler ash and clinker.

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Strength Develops in Oil Securities

General Advance in Market is Slow to Include Petroleum Shares But Substantial Upward Movement Believed Justified

By N. O. Fanning.
Room 543, No. 30 Church St., New York

Room 543, No. 30 Church Street, N. Y.

NEW YORK, July 28.—The general advance in securities of the last few weeks, and particularly the decided strength of the last week, was slow to include oil stocks. However, strength in oils dedeveloped during the last few days Whether this is a reflection of the general movement or whether it is based on a revised opinion of the oil outlook, is a matter of guesswork at the time of writing, but students of conditions are inclined to the opinion that despite acknowledged uncertainties as to how the industry will be situated at the close of the year, a substantial upward movement is justified on the basis of depreciated security values obtaining. While the general market has shown signs of being a real bull market, until recently most of the traders have been making an exception of oil for favorable comment. There is probably still a fairly short interest in some of the oil stocks and to a certain extent recent advances may be attributed to covering. Chances are that favorable news, particularly in the nature of declines in crude oil production and drafts on gasoline stocks, will be seized upon in Wall Street in its present mood as sufficient cause for an extensive rise in the oils.

Announcement of the retirement of J. S. Cosden as president of Cosden & Co. and the new aligment of the executive committee of the company indicates active control on the part of large banking interests. Mr. Cosden will continue as a director of the company but will give up active participation in its affairs owing to his desire, according to the announcement, to give greater attention to his Venezuelan oil interests. Mr. Cosden is largely interested in the Lago Petroleum Co., with large concessions in the South American country.

Union Issue Oversubscribed.

One of the most important financing operations in oil in recent years is the offering of 235.000 shares of Union Oil Co. of California, purchased recently from the Shell-Union Oil Co. by Dillon, Read & Co. The stock was offered in $100 par value certificates with the statement that within a few weeks each holder will receive in exchange four certificates of $25 par value for each $100 share. The company recently authorized this change in par value and application will be made to list the stock on the New York Stock Exchange. The company is paying currently dividends at the rate of $7.20 a share. The issue just offered was oversubscribed.

The sale of this stock completes the last phase of a struggle waged by the Royal Dutch interests to acquire control of one of the major oil companies in California. Royal Dutch has acquired 26 percent of the total common stock of Union Oil when their plan for complete domination was blocked by California interests in the company which formed the Union Oil Associates, in which 57 percent of the total shares of Union Oil was placed under a perpetual trustee agreement in a successful effort to prevent domination by a foreign company. Several months ago the Royal Dutch interest which was held by the Shell Union Oil Corporation was sold to the bankers who have just made the public offering of the stock.

The flotation is one of the most important oil stock transactions since the war, the amount on the basis of par value being $23.306,400, and will place in the New York market the capital securities of one of the oldest and largest California oil producing companies. The company has earned a net profit in each of the 34 years of its existence. In California it has oil reserves of 20.000.000 bbls. of crude, according to a survey of E. De Golyer, and with holdings of land amounting to 615.000 acres in fee and nearly 184.000 acres under lease. The latest report of earnings, covering the first six months of this year, showing earnings at the annual rate of $12.400,000 after depreciation charges of $5.200,000, or approximately $13 a share available for the common stock.

Simms Petroleum Co.

The Simms Petroleum Co., Inc., for the six months ended June 30, 1924, reports net income of $1,654,866 after expenses, depreciation, depletion, etc., equivalent to $2.47 a share earned on 669.065 shares (par $10) of capital stock. This compares with net income of $613,786, or 92 cents a share on 664,042 shares in the first half of 1923. The consolidated income account for the six months ended June 30, 1924, compares as follows:

	1924	1923
Gross income	$3,887,811	$2,631,712
Expenses and miscellaneous charges	1,085,170	959,881
Gross profit	$2,802,641	$1,671,831
Developmentexpenses	323.457	412.420
Depr., depl & lease abn.	824.318	645.625
Net income	$1,654.866	$613,786

President L. L. Marcell has issued the following statement of the second quarter's earnings of the White Eagle Oil & Refining Co., ending June 30, 1924 and 1923:

	1924	1923
Sales	$4,043,881.11	$4,259,777.13
Cost of sales	2,705,744.16	2,748,804.55
Gross profit	$1,338,139.95	$1,510,972.58
Expenses:		
General administrative and selling expense	635,449.93	570,108.57
Profit from operations	$702,690.02	$940,863.91
Add:		
Miscellaneous income credits	63,666.65	62,008.13
Total income	$766,356.67	$992,872.14
Deduct:		
Miscellaneous income charges	154,977.85	48,356.40
Net income second quarter	$ 611,378.82	$944,516.65
Net income first quarter	1,007,588.75	790,069.72
Net income first six months	$1,618,967.57	$1,734,586.37

The above represents Net Income before deducting Reserve for Depreciation, Depletion and Federal Income Tax.

Royal Dutch Dividend.

The Equitable Trust Co., as depository of certain ordinary stock of the Royal Dutch Co., has received a dividend of 25 guilders for each 100 guilders par value of stock, and announced that it would distribute the dividend to registered holders of the stock on August 12 to stock of record July 30. The dividend is the final payment of 15 percent for the year 1923, and 10 percent represents an interim dividend for the year 1924.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

No.	Stock—	Par	$Dividend Rate	Closing Quotations July 28	July 7	Range High	1924 Low
1.	American Republics	..	..	*36	*36	43	25
2.	Associated Oil	25	6	*28⅝	*28⅛	34⅝	27⅝
3.	Atlantic Refining, common	100	4	83¼	91	140⅛	83⅛
4.	Barnsdall "A"	25	..	19⅝	20¼	18⅞	14
5.	California Petroleum, common	25	7	22⅛	22⅞	29¼	21⅝
6.	Cosden & Co., common	..	..	27⅝	28⅝	40¼	23⅛
7.	General American Tank	..	†3	*42	*39	48¾	38½
8.	General Asphalt	100	..	43½	41⅛	49	31⅝
9.	General Petroleum	25	8	44¼	41	41½	38⅝
10.	Houston Oil	100	..	73	72	82½	61
11.	Independent Oil & Gas	10	..	7⅛	*7⅝	9¼	6⅝
12.	Indian Refining	10	..	6⅝	*6⅝	7	3⅝
13.	Invincible Oil	50	..	12⅝	12⅝	15⅝	11⅝
14.	Maracaibo	..	..	30	28⅛	37½	25⅝
15.	Marland	..	..	31¼	31½	42	29
16	Mexican Seaboard	..	..	20⅞	20⅛	24⅛	14⅛
17.	Middle States Oil	10	..	1⅝	1⅝	6⅛	1⅝
18	National Supply	50	6	57¾	58	72⅛	56
19.	Pacific Oil	50	†2	47⅝	48¾	58¼	45
20.	Pan-American, common	50	16	56	52½	61¼	44¼
21.	Panhandle Prod. & Ref.	..	..	2¼	*2¼	4½	2¼
22.	Phillips Petroleum	..	†2	35	35⅝	42⅛	32⅝
23.	Producers & Refiners	50	..	26¼	26½	43½	22⅝
24.	Pure Oil, common	25	6	24⅝	20⅝	26⅝	20
25.	Royal Dutch, N. Y. sh.	13.40	2.62	44½	50	59½	48
26.	Shell Transport	10	x92½	*36	*35¼	41½	33
27.	Shell Union, common	..	†1	17	17	20¼	16¼
28.	Simms Petroleum	10	..	13⅝	13	14⅞	10⅝
29.	Sinclair Consolidated, common	..	†3	17½	18⅜	27½	18⅛
30.	Skelly Oil	25	..	18⅞	19½	29	17⅜
31.	Standard of California	25	8	57⅜	57¼	68½	55⅛
32.	Standard Oil of New Jersey	25	4	35⅞	34⅜	42¼	33
33.	Standard of New Jersey, ffd.	100	7	*118	117⅞	118⅝	115¾
34.	Superior Oil	..	..	7⅛	7	7⅞	2⅞
35.	The Texas Co.	25	12	40¼	39½	46⅝	37⅝
36.	Texas Pacific Coal & Oil	10	..	9½	*9	15¼	8¼
37.	Tide Water Oil	100	4	*125	123½	151	119
38.	Transcontinental	..	..	5⅞	4⅝	6¼	3⅝
39.	Union Tank, common	100	5	112	*97	104	94
40.	White Eagle Oil & Refining	..	‡2¼	23¾	*24⅛	29⅜	23⅛
	Standard Oil Stocks						
41.	Anglo-American Oil	£1	25	*15⅛	15	18	14⅜
42.	Borne Scrymser	$100	12	*215	*220	264	150
43.	Buckeye Pipe Line	50	14	60	*61	85½	60
44.	Chesebrough Mfg., common	25	11	49½	*49⅛	53⅝	29¼
45.	Continental Oil	25	8	42	*39	54⅞	42⅛
46.	Crescent Pipe Line	25	..	12⅜	*11½	20	16
47.	Cumberland Pipe Line	100	10	145	*125	144	109
48.	Eureka Pipe Line	100	8	*95	*95½	105	95
49.	Galena-Signal, common	100	4	60	*56⅜	69⅜	55¼
50.	Humble Oil & Refining	25	4.8	36	36	43⅜	36
51.	Illinois Pipe Line	100	12	*132	131	161	131
52.	Imperial Oil, Ltd.	25	12	102½	100½	119	99
53.	Indiana Pipe Line	50	16	91	91½	100	85
54.	International Petroleum Co.	100	x50	19	17⅛	22¼	16⅞
55.	Magnolia Petroleum Co.	100	4.5	131	*128	160	124
56.	National Transit	12.50	16	*21½	*21½	25⅞	21¼
57.	New York Transit	100	10	64	*62	97	69
58.	Northern Pipe Line	100	6	*83	80½	107½	80¼
59.	Ohio Oil Co.	25	8	61¼	61	79½	60
60.	Penn-Mex. Fuel	25	..	*28	*31	45⅞	32¼
61.	Prairie Oil & Gas	100	8	211	212	269	204½
62.	Prairie Pipe Line	100	8	105	110½	111	100
63.	Solar Refining Co.	100	15	181	*183	225	170
64.	Southern Pipe Line	100	16	96	95	100	89½
65.	South Penn Oil	100	..	*137	126	176	130
66.	South West Pa. Line	100	8	*87	*85	89	80
67.	Standard of Indiana	25	10	57½	56⅝	68⅝	55⅝
68.	Standard of Kansas	25	10	40½	*39½	50½	38⅝
69.	Standard of Kentucky	25	16	115⅝	108⅓	120	102¼
70.	Standard of Nebraska	100	20	244	*228	256½	198
71.	Standard Oil of New York	25	5.6	40	39¼	48	37⅝
72.	Standard of Ohio, common	100	10	285	288	236	277
73.	Swan & Finch	100	..	*46	40	81	34
74.	Vacuum Oil	25	10	62⅝	62½	69¼	56½
75.	Washington Oil	10	10	28½	*25	29	25
	Miscellaneous Stocks						
76.	Cities Service, bankers' shares	..	†21	*13⅜	*13½	16	13¼
77.	Gulf Oil Corp. of Pennsylvania	25	6	*58	58	65	56⅜
78.	Mutual Oil	5	10	10⅝	9⅜	14	9⅜

*Bid, no sales. †In dollars. ‡The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

July 14	48.96	June 10	47.63	May 6		49.59
July 7	48.38	June 3	48.88	Apr. 29		49.56
June 30	47.69	May 27	49.01	Apr. 22		46.77
June 23	46.92	May 20	48.25	Apr. 15		50.03
June 17	47.94	May 13	48.24	Apr. 8		52.66

MICHIGAN OIL MEN HEAR TRADE TOPICS

ST. JOSEPH, Mich., July 26.—At the meeting of the Michigan Independent Oil Men's Association held here several topics of close interest to oil jobbers were discussed. Charles W. Whitehair, of White Hair Brothers, Cleveland, Ohio, outlined the form of insurance an oil distributor should carry. A. D. Dubuisson, a prominent oil jobber and mayor of South Haven, Mich., presented a carefully prepared paper on "Delivery Costs—Both Tank Wagon and Service Station."

Colonel Sidney D. Waldon of Detroit ably presented arguments against a gasoline tax and the State association unanimously reaffirmed by resolution its opposition to such a tax. E. E. Grant of Chicago addressed the association on marginal contracts. In a very clear manner he explained that the independent jobber, if he expects to continue to enjoy an independent source of supply, must live up to the letter of his contract exactly as he expects the refiner to do. The details of the meeting and program were handled by James A. Gilmore, field secretary of the association, with the assistance of Jay Theisen of the Sieber Oil Co., St. Joseph. H. H. Ragle, president of the association presided at the business sessions.

SUIT FOR LULING LAND

AUSTIN, Tex, July 26.—Suit by the State of Texas to uphold its title to valuable oil land in the San Marcos and Guadalupe Rivers, between the producing oil fields of Guadalupe and Caldwell Counties, was filed in Fifty-third District Court Wednesday against the United North and South Oil Co. and 26 other defendants. The suit, filed by Attorney-General W. A. Keling, asking $200,000 damage sand title to the disputed riverbed property, followed the recent action of the State in granting oil and gas prospecting permits to C. S. Young and W. F. McManus on land in the bed of the stream.

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Some of the factors in this experience that are of particular interest to the business man in connection with fire insurance, have been recently embodied in our monograph S 70, "When Insurance Insures and When it Doesn't."

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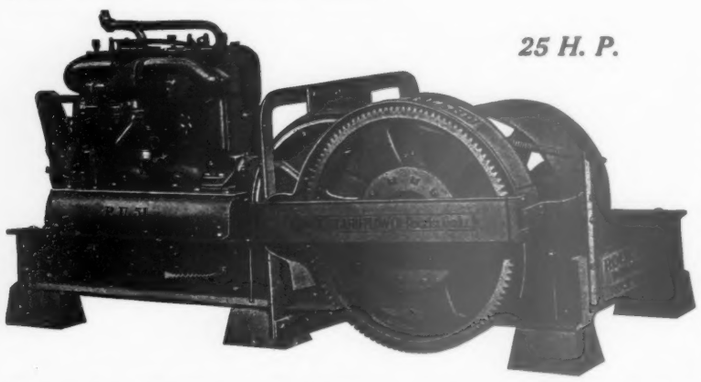

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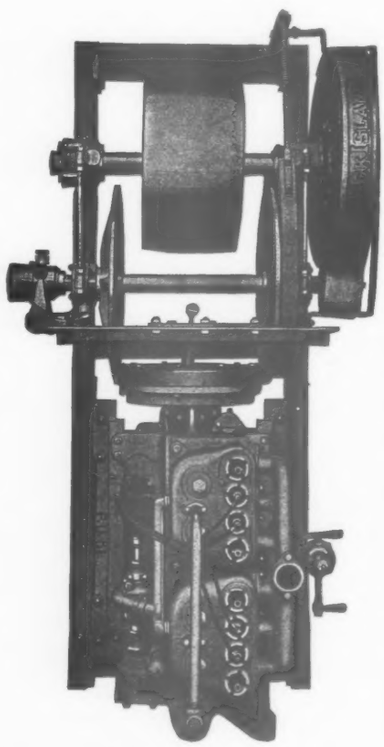

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LEASING AND WILDCAT PLAY FEATURED KANSAS

(Continued from Page 32)

NW NE, same section, was also good for 730 bbls. from sand at 2,854-78 feet. Most of the wells were of the 150-bbl. to 250-bbl. calibre, but the producing area had extended to more than a mile in length at the end of June.

Rainbow End Pool

The addition of three wells to the Rainbow End Pool, southwest of Winfield, was another important development in Cowley County. The Independent Oil & Gas Co. bought a half interest in the 3,000-acre block on which the pool is located and then sold a half of the half interest to the Marland Refining Co. for $500,000. The best well of the four which had been completed in the pool to June 30 was the north offset to the discovery No. 1 Wertman, C SW SW NE Section 20-33-3, which came in the latter part of May and gauged 1,844 bbls. in its first 24 hours. Sand was found at 3,182-3, 206 feet. The four wells in the pool were averaging between 2,000 and 2,100 bbls. daily in June. The discovery well, No. 1 Johnson, was still holding up after about eight months to its initial production of 300 bbls. daily.

North of this pool, the Alcorn Oil Co.'s wildcat, No. 1 Wood, NE cor. Section 9-33-3, found the second break at 3,510 feet and when drilled to 3,515 feet swabbed and flowed 303 bbls. in the first 24 hours. It came in about the last day of June.

Deeper drilling in an old field by the J. A. Hell Co. resulted in a new Bartlesville sand pool. The company's No. 7 Delfelder, CWL NW SE, Section 24-32-4, reached the sand at 3,003 feet and drilled it to 3,032. It swabbed about 70 bbls. daily for a while and suddenly started flowing, making 265 bbls. through 40 feet of cavings.

Another discovery that was considered good enough by large compaies to justify the purchase of acreage in the vicinity was made by the Trees Brothers in their No. 1 Urban, C NE NE SE, Section 10-31-3, northwest of Winfield. This well found sand at 3,042-54 feet early in June and tested 50 bbls. of 42.5 gravity oil. It was drilled to 3,065 feet then plugged back and shot with 10 quarts after which it swabbed 65 bbls. and tanked 1,000 bbls. in 21 days.

New Wilcox Discovery.

In Chautauqua County, a new Wilcox discovery was made by L. R. Page & Co. in their No. 1 Malone, C SE SW NE, Section 18-32-10 about May 15. Pay sand was reached at 2,345-50 feet and the well flowed for 30 hours at the estimated rate of about 35 bbls. an hour but this was thought by scouts to be due to gas from an upper sand which had been bradenheaded at 2,039 feet and which broke in at the bottom of the pipe. When the pipe was lowered, the gas was shut off and the well quit flowing but the well was slopping over about 50 bbls. of 28.5 gravity oil daily. The Prairie Pipe Line Co. refused to connect to the well so nothing further was done to test its possible production. The same interests, however, were drilling another well on the lease.

The city of Independence saw visions of becoming a real oil town again as the result of discovery made by the Red Bank Oil Co. early in July. The company's No. 1 Coleman, SW cor. SE, Section 28-32-14, flowed 3,000 bbls. in the first 16½ hours from sand at 1,678-82 feet. Offsets were drilling as fast as they could be put down. This was the only Wilcox test out of 30 or more in Montgomery County since the Red Bank Oil Co.'s discovery last year near the Oklahoma line that succeeded in finding production. The Coffeyville Pool, known as the Lamb Pool, in honor of the discoverer, Homer T. Lamb, had 20 producers at the end of June and about 1,000 bbls. daily were being shipped daily out of the field in tank cars. It was estimated that the production could be increased to 2,000 bbls. daily if the wells were opened to capacity. The field was still undefined to the east.

Greenwood County furnished nothing of importance that was new, but provided many nice completions in fields that were discovered last year. The Agard Pool, which started the year with two wells, was developed and contained numerous wells ranging from 100 to 400 bbls. The pool's area was extended several times during the year by good producers. The Browning Pool in township 22-10 also yielded good results but teh best wells of the county came from the Thrall Pool in township 23-10. Several wells on the Phillips Petroleum Co.'s Lewis lease in the NW of Section 33-23-10, in particular, were good for from 500 to 700 bbls. initially, after shots.

Although there were little more than half the completions in Kansas during the first six months of this year than there were in the same period of 1923, a comparison of the figures discloses the fact that the percentage of oil producers was higher, and the average initial production per well was much greater. Out of 525 completions in the first half of 1924, 331 were oil wells and their average initial production was 135.3 bbls. In the first half of 1923, only 569 out of 927 completed wells yielded oil in commercial quantities and the average initial production was correspondingly low, being only 87.2 bbls. The average initial production this year, in fact, was the highest ever recorded during the first six months of any year so far as records show, the nearest figures to it having been made in 1918 when the average was 126 bbls. each from 1,759 oil wells.

Among the areas that figured in the decline from last year Butler County stood out prominently and its demise as an oil producing county seems about complete. In the first half of this year 22 wells were completed in Butler County and their total initial production was just 65 bbls. In the first half of last year, Butler County had 156 completions good for 6,150 bbls. flush output. Marion County also slumped from 22 completions and 1,160 bbls to 11 completions and 295 bbls. Greenwood County completions were of the better grade than last year but there were fewer of them and the output was less by more than 6,000 bbls. Montgomery County figured in a big increase from 122 bbls. last year to 4,405 bbls. in the first six months of this year, although the wells finished were fewer by 3. Miami-Franklin-Anderson counties also increased their initial production considerable from 77 bbls. to 2,638 bbls. Among the miscellaneous counties, Cowley loomed up with 5,850 bbls. from 39 wells completed, while Russell and Rice Counties were new names on the list.

Production Peak in May

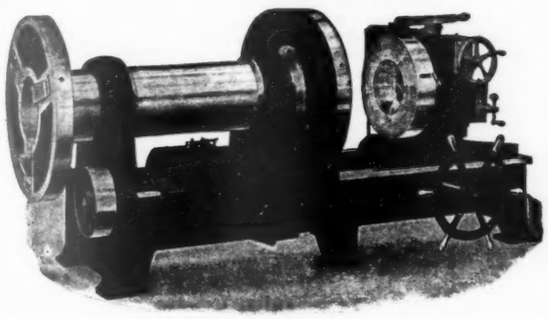
The peak of new production came in May when 143 wells were completed for 14,763 bbls. The figures had increased regularly from January.

KANSAS

County—	Comp.	Prod.	Dry	Gas
Butler	22	65	17	1
Marion	11	295	6	0
Greenwood	280	29.691	67	4
Chautauqua-Elk	33	1.090	8	10
Montgomery-Wilson	31	4.405	7	4
Neosho-Allen	20	101	12	3
Miami-Franklin-Anderson	65	2,638	16	3
Miscellaneous—				
Chase	2	0	2	0
Cowley	39	5.850	11	7
Harvey	5	225	3	0
Morris	1	0	1	0
Sedgwick	1	0	1	0
Coffey	1	0	1	0
Sumner	4	20	2	0
Bourbon	2	0	1	1
Russell	1	270	0	0
Lyon	3	0	3	0
Republic	1	0	1	0
Rice	1	130	0	0
Barton	1	0	1	0
Clay	1	0	1	0
Total	525	44.780	152	43
Same mos. last year	927	49.648	317	43
Difference	402	4.868	165	1

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	37	1.045	17	1
February	77	6.257	33	14
March	72	3.001	24	7
April	114	8.936	24	19
May	143	14.763	31	1
June	82	9.878	23	1
Total	525	44.780	153	43
First 6 mos. 1923	927	49.648	317	43
First 6 mos. 1922	748	39.230	193	25
First 6 mos. 1921	903	70.678	227	66
First 6 mos. 1920	1,424	79.884	222	91
First 6 mos. 1919	1,701	61.623	459	109
First 6 mos. 1918	2,318	221.058	454	68
First 6 mos. 1917	1,312	96,142		



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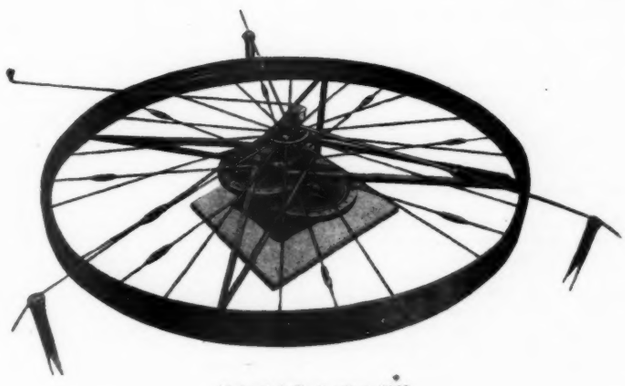

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23

Oklahoma Natural Rates Ordered Cut By State Commission

OKLAHOMA CITY, July 29.—City gate gas rates charged by the Oklahoma Natural Gas Co. were ordered reduced today from 38 to 30 cents a thousand feet by the State Corporation Commission.

The order affects 38 towns and cities in the State served by the Oklahoma Natural Co. The reduction was ordered after the company had submitted a schedule of earnings to the Corporation Commission.

The 38-cent rate was ordered by the State Supreme Court after the Corporation Commission had reduced a 40-cent rate to 25 cents. When the Corporation Commission attempted to reduce the rate the company obtained an injunction in Supreme Court and later the court authorized the 38-cent rate.

The inventory of the commission, one of the premises upon which the reduction is based, states that a decrease of $112,-714 in net income of the company for the 12 months ending April 30, 1924, would have resulted for each 1-cent reduction on the 38-cent schedule.

The revenues of city gate sales for the fiscal year was found to be $4,283,043.69. The gross revenues totaled $4,727,520.49. The cost of gas purchased by the company was $1,110,029.03, while the cost of producing was was $286,622.32, making a total of $1,396,651.35 and leaving the net revenue $3,330,869.14. Operating expenses and taxes totaled $1,400,727.43, and the depreciation allowance was $1,030,141.71.

The order directs the Oklahoma Natural Gas Co. to come into court August 25 for a hearing, at which time the company can have an opportunity to show cause why the order should not be made effective at once.

Pending the hearing the enforcement of the order will be held in abeyance.

OIL MAY BE STORED FROM INDIAN LEASES

S. E. Wallen, superintendent of the Five Civilized Tribes agency, Muskogee announces the department of the interior has granted his office authority to enter into contract with leases to permit them to store such royalty oil as the pipe line companies will not take at this time, and which is to be paid for at the posted market price at the time of the sale, rather than at the time the oil is run. It will be necessary for the lessees to confer with Mr. Wallen and procure the necessary form of contract from him.

The transportation, storage and evaporation featured have not yet been passed upon, but a committee of the Mid-Continent Oil & Gas association is working on it.

UNION OIL ABANDONS RECORD ROTARY HOLE

LOS ANGELES, July 26.—Finis was written to an interesting search for oil when the Union Oil Co. abandoned its No. 1 Gardena well in the Dominguez field, at a depth of 7,319 feet. Not only was the new world's record for rotary drilling achieved in this well, but the drill was carried 4,272 feet in open hole below the point where eleven-inch casing had been set.

At no time had any favorable showings been encountered, the formations being chiefly alternating sands, shale and sandy shales. A very good picture of the underlying formations northwest of the company's Callender lease was obtained from the logs and cores which may throw light on the thickness of the Fernando formations in this part of the State.

When the well was abandoned the drillers were making 21 feet per day. The condition of the hole would have permitted continuance of drilling but no good purpose would have been served. The hole is being plugged, and the derrick dismantled to be used on another location.

CHARCOAL GAS AS MOTOR FUEL TRIED BY FRENCH

The effort to obtain a gaseous motor fuel from charcoal has for some time occupied both science and industry in France, where the importation of gasoline now amounts to 1,000,000,000 francs annually and has a deterioating effect on French exchange. Recent issues of "le Bois" and "Bois et Resineux,'" leading French lumber journals, contain descriptions of the demonstration of the "Imbert gazogene," an apparatus for producing charcoal gas, which recently took place in the Berliet factory at Lyons before representatives of the Ministry of War.

The machine used was a Berleit automobile of 25 horsepower. The "Imbert gazogene" creates carbon monoxide by contact of air with incandescent charcoal; the gas is mixed with air and introduced into the motor cylinders, in a few moments. The gazogene weights 50 kilograms (1 kilogram equals 2.204 pounds) and consumes 15 kilograms per 100 kilometers (62.14 miles.) Its heater and purifier, with charcoal sufficient for 200 kilometers, are contained in a sheet iron case behind the vehicle.

During 1923, France imported 728,000 tons of gasoline. If the new process proves practical, it is claimed this can be replaced by an equal weight of charcoal furnished from the French forests, which give annually 18,000,000 cubic meters of wood, one cubic meter yielding 168 kilograms of charcoal.

The Council of National Defense is directly interested, as the 100,000 automobiles indespensable in war may be driven by French fuel derived from charcoal instead of gasoline shipped from foreign countries, whose importation could be prevented by the enemy or by foreign oil groups. Charcoal is safer than gasoline, as the storage depots cannot be fired with explosives, nor will airplanes be in as great danger from incendiary shells. The expense of running a 25-horse-power motor vehicle by gasoline is from 36 to 40 francs per 100 kilometers; by the use of charcoal it is claimed this cost can be reduced to 5 or 6 francs. The promoters say that the gasoline motor may be readily converted to a charcoal-burning one without diminishing its efficiency.

LULING-BEAUMONT LINE READY

The 8-inch welded pipe line of the Magnolia Petroleum Co. from Luling to Megpetco, near Beaumont, is completed and being tested with water, which is moving at the rate of about 3 miles per hour. The line tested shows no leaks and it is planned to start running oil at once. The pumping station at Aldine is not finished, work being delayed on account of litigation over the site. For this reason only about 10,000 bbls. per day will be handled for the present. The main line station at Hull, in Liberty County, the last station on the line, is being enlarged by the installation of another unit. That station is now handling an average of 70,000 bbls. per day from the Mid-Continent, north and east Texas fields. With the additional unit the station will have a capacity of approximately 90,000 bbls. per day.

GAS FOR NEW ORLEANS?

New developments point to a growing belief that natural gas will before long be served to the people of New Orleans. Commissioner Maloney has forwarded to the Louisiana Legislature a bill providing for a complete investigation into the question of piping natural gas to New Orleans.

MARLAND CRUDE PRICES

The Kay County Gas Co. (Marland) on July 29 posted the following prices for Oklahoma crudes: 30° to 32.9°, $1.20; 33° to 35.9°, $1.30; 36° to 38.9°, $1.40; 39° to 41.9°, $1.50; and 42° and above, $1.65.

Late Fields

OKLAHOMA

In the Papoose Pool, Hughes County, Gibson & Zahnizer's No. 1 Carter, SE cor. NW, Section 4-9-9, topped the sand at 3,337 feet and with the bit 10 feet in, started out at the rate of 120 bbls. an hour, gauging 150 bbls. in its first hour and a quarter. The well is a diagonal northwest offset to the Berry Petroleum Co.'s No. 3 Meadows, which started at 2,200 bbls. and has held up well. The Berry lease is truly remarkable, as No. 1, the biggest well in the pool, which started at 2,868 bbls. about June 1, was still producing from 2,300 to 2,500 bbls. daily, and not a well of the three on the 40 acres is making water.

In the Cromwell Pool, the Berry Petroleum Co. deepened its No. 1 Yarhola, NW cor. NE, Section 22-10-8, from 3,466 to 3,504 feet in sand topped at 3,412 feet, making its total depth 192 feet in the sand. The production was increased from 670 bbls. to 1,561 bbls. but fell off in the second 24 hours to 1,180 bbls. This well is an east offset to the Shaffer Oil & Refining Co.'s record-breaker, No. 8 Yarhola, which had declined to 140 bbls. an hour on Tuesday. The Shaffer lease (80 acres) produced 7,550 bbls. Monday. The company's No. 6, C SW NE NW, same section, was drilling at 3,453 feet in sand topped at 3,400 feet and making 50 bbls. an hour. The Tidal Oil Co.s No. 6 Harjo, C SW NE NE, Section 21-10-8, was making 50 bbls. an hour from sand at 3,468-3,521 feet.

GULF COAST

The Gulf Production Co.'s No. 15 Hager fee, on the east side of Cow Bayou in the Orange Pool, which came in early in the week flowing wild and then caught fire, has been capped. The feat was accomplished Saturday by 200 men. The well is making 3,500 bbls.

In the West Columbia Pool, The Texas Co.'s No. 81 Hogg is on air, flowing 300 bbls at 2,850 feet and No. 11 Abrams is making 500 bbls. They are on the north side. The Humble Oil & Refining Co. abandoned No. 48 Smith in the Goose Creek Pool. The Sun Co.'s No. 19 River, on the north side of the Humble Pool, which came in originally flowing 3,000 bbls., has dropped off to 1,500 bbls per day.

AUSTRALIA MAY USE ALCOHOL

The Australian Commonwealth Government should scrap the agreement with the Anglo-Persian Oil Co., and establish a national fuel, composed of, say, 25 per cent. Australian benzol and 75 per cent. Australian power-alcohol, says H. W Harrison, secretary of the Australian Chamber of Automobile Industries. Last year the consumption of motor fuel in Australia was 35,000,000 gallons, as against 30,000,000 in 1922. The duty on imported spirit is a penny a gollon. The campaign of the Chamber of Automotive Industries and other motoring interests to secure supplies of home produced fuels has not been wholly in vain. The acetate of lime factory on the Brisbane River (Queensland) is being utilized for the production of power alcohol, and the Broken Hill Proprietary, Ltd., is distilling benzol from its coke ovens. These two sources of supply account for an annual production of 2,000,000 gallons.

NEW RICHFIELD PLANT

LOS ANGELES, Cal., July 29.—The Richfield Oil Co. has commenced operations at its new refinery at Hynes, near Long Beach. Up until this time the Richfield had the Perfection plant of the John P. Mills oragnization under lease. This lease expired with the completion of the Richfield's own plant.

The Perfection plant has now been taken over by the Paulley Oil Co. which plans to operate it on about 3,000 bbls. of crude per day. It is understood the Gilmore Oil Co. also made a bid for the plant but was unsuccessful.

PETROLEUM LEAGUE ENTERS FINAL STAGE

The final third of the last half of the Petroleum League baseball season will begin this week with the Sun Oil Co. team still in the lead, but pressed closely by at least three other teams. The race is tightening up considerably and a consistent winning streak might place any team in the league in first place. The schedule for the remainder of this week and next week follows:

July 30—Sun Oil Co. vs The Oil and Gas Journal.
July 31—Pure Oil Co. vs Waite Phillips.
August 1—Carter Oil Co. vs Sun Oil Co.
August 2—Skelly Oil Co. vs The Oil and Gas Journal (two games).
August 4—Sun Oil Co. vs Pure Oil Co.
August 5—Skelly Oil Co. vs Waite Phillips.
August 6—Carter Oil Co. vs The Oil and Gas Journal.
August 7—Sun Oil Co. vs Waite Phillips.
August 8—Skelly Oil Co. vs Carter Oil Co.
August 9—Pure Oil Co. vs The Oil and Gas Journal.

NEXT RFGIONAL PLANT SESSION NEAR COOPER

The third regional plant operators' meeting under the auspices of the Association of Natural Gasoline Manufacturers, will be held at the Phillips Petroleum Co.'s clubhouse in the southeast quarter of Section 25-27-5, near Cooper, July 31. Three sessions will be held during the day and an excellent program has been prepared as follows: "Magneto and Ignition," by O. W. Prescott, Dunright Repair & Ignition Co.; "Water Treatment," by George H. Massen, Dearborn Chemical Co., Kansas City, Mo.; "Hypochloride Treatment of Natural Gasoline," by C. T. Johnson, Marland Refining Co.; "Value of Salvaged Material," by Emby Kaye, general superintendent gasoline department Skelly Oil Co.; "Mineral Seal Oil as an Absorbent Agent," by J. W. Jones, Marland Refininfi Co.; "Treatment of Discolored Gasoline," by Otto Peters, superintendent Kiefer plant, Chestnut & Smith Corp.; and "Lubrication," by J. A. Edwards, Marland Refining Co., R. R. Owen, Marland Refining Co., will act as chairman.

CRAIG WELL TEST RUN SHOWS 200 BBLS AN HOUR

CASPER, Wyo., July 26.—The test run of the joint well of the Transcontinental and The Texas Co., in the Moffat Field, Colorado, was begun at 9 a. m. and the report at 5 p. m. showed 200 bbls. per hour. The pipes were found O. K., without leaks or breaks, and there was no fluctuation during the run. Seven days will be needed to fill a 35,000-bbl tank. Six tanks are now under construction with a capacity of 250,000 bbls.

The loading rack on the Moffat railroad for handling 10 cars of oil per day has been completed.

The Midwest Co., drilling on the Iles structure 22-4-92 made a strike at 2,360 feet in the Frontier sands. The Dakota sands are 500 feet deeper. The well promises to equal The Texas Co.'s discovey well and proves the Iles structure and Gossard structure in 5-94.

REHEARING GRANTED.

WINCHESTER, Ky., July 28.—J. Fred Miles, Lexington, Ky., oil operator, with large holdings in the Eastern Kentucky fields, has received official notice that his request has been granted by the Court of Appeals of Kentucky for a rehearing of his suit for the recovery of $712,500 damages claimed due from the United Oil Co. for alleged breach of contract, and the case, which is on the largest in point of amount involved on the docket of the Kentucky courts, has been ordered sent back for hearing at the next civil term in Estill County.

California Utilities Use 10,000,000 Bbls. of Fuel Oil in 1924

LOS ANGELES, Cal., July 26.—Approximately $60,000,000 will be expended by gas and electric utilities of California and by railroads using oil for fuel in the State during hte present year, said State Railroad Commissioner Harley W. Brundige, speaking before the recent luncheon of the oil industry here. He attributed to the present dought the increase of more than 300 per cent in the use of fuel oil by electric utilities. In 1923 fuel oil for this purpose totaled 3,000,000 bbls., and estimates for 1924 place the total at 10,000,000 bbls.

Discussing price regulation, L. P. St. Clair, vice president of the Union Oil Co. of California, declared the oil industry should be required to furnish public utilities with oil during periods of stress or a crisis such as has been caused by the dought, and that the companies should maintain sufficient commodities on hand for this purpose, but that in so doing they should be entitled to the market price.

Regulation of public utilities in California was the general theme discussed by Mr. Brundige ,who stated the subject was closely associated with the petroleum industry. Any fluctuation in the production or price of oil is immediately reflected in the rates and service of a number of chief utilities of the State.

The Railroad Commission for the last two years has kept in effect a sliding scale of rates for manufactured gas and steam heating service, based on the prevailing price of fuel oil. All rates for manufactured gas, produced from oil, are automatic at present, the rate varying on the basis of approximately 2.1 cents per 1,000 feet for each 10 cents increase of decrease in the price of oil per barrel. An increase of 25 cents a barrel in oil will automatically result in an increase in the public's bill for gas service in California by $1,150,000 a year. Every 10-cent increase in the price of oil for steam roads means an increase in operating expenses of $2,600,000 a year.

The fuel bill of the electric utilities of the State for the year, due to increased price of oil and increased use because of conditions, will approximate $10,000,000 more than in 1923.

"One of the most remarkable growths in the public utility field," said Mr. Brundige, "has been displayed by the automotive lines of which there are 670 under the jurisdiction of the commission. These are great gasoline and oil users. It is conservatively estimated that these lines carried upwards of 25,000,000 passengers during the last fiscal year, and employed a fleet of more than 1,600 cars and 1,500 motor trucks and trailers."

PENN MEX GETS 5,000-BBL. WELL

TAMPICO, Mexico, July 26.—Penn Mex Fuel Co.'s No. 4 Jardin, south of the Tuxpam river, and southeast of the company's Alamo holding's, is reported now to be finished at a sub-sea level of 2,110 feet, probably good for 5,000 barrels. The well is deeper than No. 25 Alamo, the nearest completion. The company's No. 3 Jardin is running 6-inch at 2,270 feet, reported to be Tamasopa lime, and should be completed in a few days.

LIGNITE MAY REPLACE FUEL OIL

AUSTIN, Tex., July 26.—Fuel oil may be discarded in favor of lignite as fuel at various Texas State institutions, according to R. B. Walthall, purchasing member of the State board of control. Plans are said to be under way for changing from oil to lignite burners at the institutions at San Antonio and Terrell. Mechanical stokers are to be used. The high price of fuel oil on contracts for the coming year is given as the reason for the change.

29 POOLS PRODUCED 69 PER CENT OF THE OIL FIRST HALF OF YEAR

The 29 major pools of the United States averaged altogether 1,370,929 bbls. a day in production during the month of June. This was a slight gain over May, when the average was 1,369,661 bbls. from the same number of fields. By major pools is meant pools that have a daily average of 15,000 bbls. or more during a month.

The most notable gains from May to June were Cromwell, Oklahoma, which increased from 16,570 bbls. to 25,719 bbls.; Stroud, Oklahoma, from 16,456 bbls. to 22,716 bbls. and Luling, Texas, from 38,300 bbls. to 46,200 bbls. A number of the California Fields fell off, but none of them very much, but the Powell Field in Texas slumped from 103,106 bbls in May to 93,491 bbls. in June. The Smackover Field in Arkansas hit its highest figures for the first half of the year when it produced an average of 142,242 bbls. in June and incidentally was next to the biggest producer in the United States in June as it was in May, the first honors in both months going to Long Beach, California, which was slipping, while the Smackover Field was gaining. Long Beach in January produced 218,646 bbls. a day and in June 159,512 bbls., while Smackover in January produced 101,361 bbls., and in June 142,242 bbls.

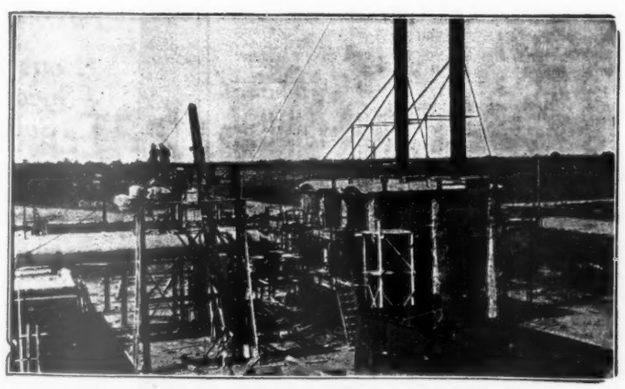
Every one of the pools listed in May remained in the honor roll in June. In the first six months of the year the major pools produced a total of 245,980,460 bbls., while all the pools in the country produced 357,683,391 bbls., the 29 majors yielding nearly 69 per cent of the total.

ENLARGING SUMMIT PLANT

OKLAHOMA CITY, Okla., July 26.—The Summit Oil & Refining Co. of Oklahoma City is enlarging its experimental refining plant here, preparatory to handling a large number of oil samples coming from the various fields. The company manufactures several products from oil residue, some of which are said to be new. William H. Borton, for 16 years a superintendent in the employ of the Ash Grove Lime and Portland Cement Co. of Springfield, Mo., recently was added to the Summit staff as assistant chemist and engineer.

DOMESTIC EXPORTS OF PETROLEUM

	Month of June		12 Mos. Ended June	
	1923	1924	1923	1924
Crude .....gals.	108,071,490	63,718,297	552,566,487	784,594,472
	$3,569,971	$2,460,145	$20,268,679	$26,342,596
Total refined petroleum.....gals.	269,557,001	360,173,502	2,820,461,506	3,642,516,248
	$29,368,451	$39,142,722	$324,723,878	$366,658,290
Gasoline, naphtha and other light products .....gals.	70,897,665	111,734,237	674,716,726	1,031,610,456
	$12,676,963	$17,947,380	$134,165,991	$160,667,895
Oils—				
Illuminating .....gals.	64,138,452	81,476,093	854,563,611	882,602,874
	$6,164,325	$8,315,901	$81,976,661	$80,516,405
Gas and fuel .....gals.	96,156,423	133,706,470	937,243,885	1,361,122,665
	$2,708,574	$4,703,819	$29,687,604	$41,613,640
Lubricating .....gals.	38,364,462	33,256,702	353,937,284	368,180,263
	$7,815,589	$8,175,622	$78,893,622	$83,860,350
Paraffin wax .....lbs.	22,163,304	29,259,178	327,282,705	367,645,169
	$774,129	$1,533,057	$11,102,991	$14,827,592



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We are glad of it as it is our desire to help everyone who wants to do business with the Petroleum Industry.

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Mail your advertisement today.

It will pay you to "Give It a Try"

Classified Wants Section

"Biggest in America"

PRODUCING COST AND MARKET VALUE OF OIL

(Continued from Page 24)

the same basis as that by the Federal Government for taxation purposes and, therefore, includes lifting expense, depletion and depreciation of capital investment, and general administrative costs.

Many operators of small wells reported that their proceeds were considerably below operating expenses and that unless prices were soon advanced, they would be forced to sell their properties at a sacrifice or abandon the wells and salvage the material.

During the period beginning January 1, 1921, and ending June 30, 1923, the data could be obtained, namely, bonuses, rentals, and lifting costs, were estimated upon the basis of our own knowledge and experience. Posted prices were applied to Government production figures to obtain estimated proceeds from the sale of oil produced. I believe this comparison is of value. The third section of the report is a summary of the money spent in unproductive drilling, that is, in the drilling of dry holes.

Cost of Operating Small Wells.

The average cost of producing oil from wells that yielded one barrel per day or less amounted, according to the returns, to $2.16 a barrel. Most of the well from which this small production came are located in the Appalachian, Lima-Indiana, Illinois, and Oklahoma-Kansas fields. The maximum weighted price received for this oil during 1923 was $2.00 a barrel, and during the large part of the time it brought less than that figure. The oil industry expended not less than $2,976,000,000 for drilling, lifting, bonuses and rentals. Dividing this figure by 1,360,851,000 barrels, the amount of oil produced during this period, gives $2.17 per barrel of production, based on this comparison. The market value of the oil produced, after subtracting royalties, was $1,892,000,000, which, divided by the number of barrels produced, gives $1.36 per barrel as the average market value. There remained a deficiency of $1,083,000,000, or about 80c for each barrel of oil sold. This deficit does not take into consideration money paid out by legitimate companies for interest, geological exploration, taxes, and general administration, and does not, of course, take into consideration cash put by the public into grossly inflated, illegitimate production schemes and so-called syndicates. During this period the oil industry experienced the greatest production in its history.

Average daily gross production on January 1, 1921, was 1,256,000 barrels, and on June 30, 1923, 2,210,000 barrels. Attention is called to the fact that in the deficit referred to consideration was not given to the increased market value of the producing properties as of June 30, 1923, compared with January 1, 1921. It was impossible, due to the numerous factors entering into the value of oil wells over this period, to arrive at a satisfactory figure. It is the custom in the producing branch of the oil business to place a higher value upon settled production than upon flush output. This value is often stated in terms of dollars per barrel of daily production. During 1923 the proportion of flush production in comparison with the total yield of the United States was very high. If a major field be considered one which reaches a maximum production of 100,000 barrels a day before it starts to decline, then eight major pools reached their peaks in 1923, compared with 18 during the entire history of the industry. Two of the eight fields reached peaks exceeding 300,000 barrels a day, and one 250,000 barrels a day. No other field in the history of the oil industry, except Cushing, which reached a peak in excess of 300,000 barrels a day in 1915, ever produced more than 150,000 barrels a day. As the proportion of flush production compared with the settled production increases, the market value of the producing properties per barrel of production declines. After very careful consideration of the increased value of producing properties at the end of the period as against that at the beginning, we have concluded such increase would not exceed in amount one-half the deficit named, leaving an actual loss to the industry of more than one-half million dollars, or abut 40c per barrel, over the period studied.

The following table summarizes the elements entering into the cost of drilling and production and the price received, as stated:

Comparative Costs and Revenues

January 1, 1921—June 30, 1923—		
Cost of drilling (see schedule A)		$1,328,003,723
Cost of l'fting 1,360,851,000 bbls. at 50c per bbl. (estimate)		680,425,500
Bonuses—		
Burbank, Osage County, Okla....	$ 43,000,000	
All other leases 31,000,000 acres at $10 (estm.)...	310,000,000	353,000,000
Rentals (estimated) 1921 198,000,000 A. at $1.00..	$198,000,000	
Rentals (estimated) 1922 207,000,000 A. at $1.00.....	207,000,000	
Rentals (estimated) 1923 210,000,000 A. at $1.00.....	210,000,000	615,000,000
Total costs		$2,976,429,223
Total value of oil less royalties (see schedule B) ...		1,892,887,500
Deficit to producer		$1,083,541,723

Cost of Drilling Wells.

The following table summarizes the average cost per well and total cost of the wells drilled in the United States, by States, during the period under review:

SCHEDULE A
Cost of Drilling Wells

	No. Wells & Dry Holes Drilled	Average Cost	Total Cost
1921—			
California	956	$69,766	$ 66,696,296
Oklahoma	5,715	29,907	170,918,505
Texas	3,111	28,429	91,553,619
Kansas	1,378	24,979	34,421,062
Ark. & La.	1,247	26,319	32,819,793
Ohio	1,310	8,000	10,480,000
Wyo. & Mont.	505	30,000	15,150,000
Penn.	1,627	8,000	13,016,000
W. Virginia	500	16,000	8,000,000
Illino's	268	8,000	2,144,000
Kentucky	2,474	6,000	14,844,000
Tennesree	31	6,000	186,000
Indiana	315	8,000	2,520,000
	19,437		$462,749,275
1922—			
California	1,089	$87,153	$ 94,909,900
Oklahoma	6,140	29,902	183,598,280
Texas	4,529	25,044	113,424,276
Kansas	1,638	23,435	38,386,530
Ark. & La.	1,852	24,356	45,107,312
Ohio	1,427	8,000	11,416,000
Wyo. & Mont.	402	30,000	12,060,000
Penn.	2,374	8,000	18,922,000
W. Virginia	500	16,000	8,000,000
Illino's	341	8,000	2,728,000
Kentucky	2,263	5,000	11,315,000
Tennessee	32	6,000	192,000
Indiana	231	8,000	1,848,000
	22,818		$541,977,298
1923—First 6 months:			
California	574	$99,198	$ 56,939,000
Oklahoma	3,465	32,092	111,198,780
Texas	2,846	24,810	70,609,260
Kansas	927	21,310	19,754,370
Ark. & La.	1,130	20,398	23,049,740
Ohio	1,033	8,000	8,264,000
Wyo. & Mont.	234	30,000	7,020,000
Penn.	1,266	8,000	10,128,000
W. Virginia	547	15,000	8,205,000
Illinois	156	8,000	1,248,000
Kentucky	1,085	5,000	5,425,000
Tennessee	18	6,000	108,000
Indiana	166	8,000	1,328,000
	13,447		$323,277,150

Summary of All Fields

Year	Total Costs
1921	$ 462,749,275
1922	541,977,298
1923 (6 months)	323,277,150
	$1,328,003,723

Much detail work was done in arriving at the drilling costs cited in this table. States were taken up county by county or pool by pool, and the number of wells drilled was multiplied by the average costs given in the questionnaires, or estimated costs where specified representative information was not available. It is recognized that the drilling costs given may be a little too high for some States, but it is equally true that they are probably too low for others and that the errors are, therefore, compensating. For the States where most of the money was expended in drilling in recent years, notably California, Oklahoma, and Texas, numerous returns were available, and it is believed exact drilling costs are shown in the table.

Fifty cents a barrel, estimated on the basis of experience and research as the average lifting cost, was applied to the statistics of production reported by the United States Geological Survey. Bur-bank bonuses were taken from the reports of the Interior Department. Ten dollars an acre was estimated as the average bonus rate throughout the general oil region. I believe this is conservative. The average bonus paid by the producers that sent in returns was $13.00 an acre. One dollar was used as the average rental; this, too, is believed to be conservative, since the average rental paid by producers who sent in returns was $1.27.

Market Value of Oil Produced.

The following table shows the gross market value of the oil produced. In order to arrive at the net income of the producer, one-eighth was deducted from the sums given in this table.

SCHEDULE B
Gross Market Value of Oil Produced

	Value of Oil Produced (Before Royalties)
1921—	
California	$203,130,000
Oklahoma	183,105,000
Texas	162,662,000
Kansas	66,634,000
Arkansas and Louisiana	55,215,000
Ohio	21,512,000
Wyoming and Montana	25,901,000
Pennsylvania	24,746,000
West Virginia	26,482,000
Illinois and Indiana	23,046,000
Kentucky	16,736,000
Tennessee	21,000
	$811,339,000
1922—	
California	$124,962,000
Oklahoma	249,263,000
Texas	188,149,000
Kansas	48,402,000
Arkansas and Louisiana	67,492,000
Ohio	13,916,000
Wyoming and Montana	31,318,000
Pennsylvania	24,921,000
West Virginia	21,979,000
Illinois and Indiana	86,251,000
Kentucky	28,510,000
Tennessee	22,000
	$884,284,000
1923—First 6 months:	
California	$ 72,781,000
Oklahoma	157,080,000
Texas	86,941,000
Kansas	24,692,000
Arkansas and Louisiana	40,443,000
Ohio	7,498,000
Wyoming and Montana	28,156,000
Pennsylvania	13,215,000
West Virginia	11,484,000
Illinois and Indiana	10,509,000
Kentucky	14,766,000
Tennessee	17,000
	$467,677,000

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Summary for All States

Year	Total
1921	$ 811,339,000
1922	884,284,000
1923 (6 months)	467,677,000
Total revenues	$2,163,300,000
Less ⅛ royalty	270,412,500
	$1,892,887,500

For 1921 the report of the United States Geological Survey was used in arriving at values. Figures for 1922 and 1923 were obtained by applying market quotations for oil to statistics of production reported by the United States Geological Survey, taking into consideration dates of changes in price and the gravity of the oil. One-eighth was subtracted in order to arrive at the net revenue to the producers. In California and on some Government land, notably in Osage County, Oklahoma, royalties average higher than this figure, and in no area do they prevail at a lower rate.

Cost of Unproductive Drilling.

The following table shows the amount of money expended in the drilling of dry holes:

Year	Number Drilled	Total Cost
1921	4,423	$ 86,034,626
1922	4,867	97,844,932
1923 (6 months)	3,414	70,647,280
		$254,526,838

The number of dry holes drilled was taken from the reports of The Oil and Gas Journal. In arriving at costs, twenty percent was deducted for material salvaged. Twenty-three percent of the wells drilled in the quest of oil were unproductive.

WILDCATTING BRINGS RESULTS IN OKLAHOMA

(Continued from Page 32)

the field was making 89,259 bbls. and had 1,523 wells on the producing list.

The northern limits of the Burbank Extension were defined early in the year, and with the poor showing of the high-priced tracts along what became known as "millionaire's row," it seems unlikely that the field will ever again produce as much as 100,000 bbls. daily.

Numerous good Burbank producers were completed during January and February, and a few wells of the gusher class were found on one of the tracts sold at the March 18-19 sale. That was in the SW of Section 11-27-5. Most of the later completions, however, were sadly disappointing to the owners.

Deep Sand at Tonkawa.

Among the discoveries of the first half of the year, the most important by far was that made by T. B. Slick in his No. 1 Laura Endicott, SW cor. Section 35-25-1W, in the Tonkawa Field, of Kay County. This well found the deep pay sand at 4,060 feet, according to the owners, and when 25 feet of the sand was penetrated, it flowed 2,870 bbls. in 24 hours, and maintained a flow of more than 2,500 bbls. for a long time. At the end of June, it was still dong better than 2,000 bbls. and when agitated on July 20, increased to 2,515 bbls. in one day.

The Pennock Oil Co. had the honor of bringing in the second deep sand well, its No. 7-A Endicott, C NE SW SE, Section 34-25-1W, having found the sand at 4,139 feet, with oil pay at 4,141-45 feet. It started out at 2,161 bbls. and then increased to 2,655 bbls. It also held up steadily, and when drilled two feet deeper on July 20, increased from 2,200 bbls. to 2,822 bbls. daily.

The third deep well was the Comar Oil Co.'s No. 4-W Carmichael, NE cor Section 3-24-1W, which found the sand at 4,149 feet, first oil at 4,155 feet and at 4,161 feet started at 75 bbls. an hour, increasing to 2,700 bbls. daily. When agitated on July 20, it flower 3,226 bbls. At the close of the half year, 45 other tests were speeding for the deep sand, several of them already below 3,000 feet, and many are expected to get large production. Most geologists correlate this sand with the Wilcox horizon.

Kay County Area.

The Kay County areas furnished several important tests outside of the Tonkawa Field. About six miles north and three miles west of the field, the Marland Refining Co. opened up a new area which caused some feverish leasing and some exaggerated reports of royalty prices. The pool-opener was the Marland's No. 1 Thomas, SW cor. Section 15-25-2W, which made 300 bbls. of oil and 15,000,000 feet of gas on May 15 from sand at 2,061-66 feet. No effort was made to drill the well in and it was still producing 200 bbls. at the end of June, while seven other tests were seeking the sand around it. This well is a mile and a half southeast of the Besdor Oil Co.'s No. 1 Chambers, in the SW cor. SE, Section 9-25-2W, which attracted a lot of attention from scouts but which was finally abandoned with a hole full of water in sand at 3,403-45 feet about February 20.

About March 10, the Alcorn Oil Co. (Marland) put its No. 1 Hubbard, CSL NW, Section 12-26-2W, on the pump and found it good for 224 bbls. in the first 24 hours from sand at 3,660-3, 761 feet. this well, coupled with the No. 1 Thomas, convinces many production experts that a real pool is going to be opened up somewhere in the vicinity. Another test that drew close attention from the scouts, the Alcorn Oil Co.'s No. 1 Hadley, NE cor. Section 6-26-2E, was abandoned the latter part of April at 4,425 feet. The same company's No. 1 North, CNL NW NE NE, Section 12-26-2W, a half mile northeast of the Hubbard well, was making 54,000,000 feet of gas from sand at 2,539-43 feet. It came in near the end of June.

Osage County Discovery

One of the first discoveries of the year was made in old reliable Osage County by the Atlantic Oil Producing Co. when it drilled an old gas well deeper to the second berak resulting in a gusher that started flowing at the rate of 155 bbls. an hour, gauging 3,380 bbls. the first day. This well was located in the CSL SW, Section 27-25-8, near Pawhuska, and and found the Wilcox sand at 2,696-97 feet. It was drilled into the lime about the middle of January and was deepened a foot and a half tne first of April. Like most other Wilcox pools in that part of the State, as well as elsewhere, it was the cause of numerous dry holes, although the Marland Refining Co. on May 10 added a well to the pool that was initially good for 300 bbls. an hour, gauging 2,160 bbls. in the first 8 hours partially shut in. It was the company's No. 2, NW cor., Section 34-25-8, and sand was found at 2,686-87 feet. The Atlantic Oil Producing Co.'s No. 3 came in at the same time making 105 bbls. an hour. At the end of June, there were five completed wells in the pool and five others drilling.

Pettit Pool's Big Wells.

The banner Osage County pool, however, was the Pettit Pool developed by the Marland Refining Co. in Section 20-23-8. At the close of June, it had 8 deep producers and 5 others drilling, one of which came in about July 10 at the rate of 340 bbls. an hour, partially pinched in. This pool enjoyed the distinction of passing the 15,000-bbl peak during one week in May, and on June 30 was making about 12,000 bbls. daily. The record well of the pool mentioned above, which really came in after the end of June, was No. 9 Pettit NW cor. NE SE, Section 20-23-8. Another big one was No. 11 Pettit, SE cor. NE SE, which was drilled in about the first of May and made 164 bbls. per hour from sand at 2,618 feet. The Red Bank Oil Co.'s wells in this pool flowed big for a time but then stopped and at latest report were being swabbed.

Just a few miles north of this pool, the Superior Oil Corp. deepened an old well and found the Wilcox sand productive, opening a new pool. The well was No. 1 SE cor. SW Section 3-23-8, flowing 180 bbls. an hour steadily for three days from sand at 2,569-70 feet and holding up to about 2,000 bbls. daily for several weeks.

One of the most spectacular Osage County wells ever drilled was the Barnsdall Oil Co.'s No. 16, SE cor. NE NW NW, Section 32-21-12, about 12 miles north of Tulsa, which topped the Wilcox

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horizon the last day of June and flowed 4,300 bbls. of 50 gravity crude in its first 24 hours. Sand was found at 1,938-40 feet. In the same section, late in April, the same company had completed its No. 17, NW cor., for 1,100 bbls. of 52 gravity oil in sand at 1,933-38 feet, and its No. 22 in the NE cor. Section 31-21-12, was good for 1,450 bbls. of 48-7 degree oil on March 15.

Some old wells were deepened in the Osage with surprising results. Early in January, the Tidal-Osage Oil Co. deepened its No. 31, in the SE of Section 34-22-10, resulting in 94 bbls. an hour output from sand at 2,256-92 feet. Later in the month, the same company deepened its No. 34, in the NW of the same section, and it made 165 bbls. an hour from sand at 2,309-15 feet. The former well was again deepened to 2,298 feet and responded with 6 000 bbls production. Late in April, C. W. Titus and others' No. 3, NE cor. NW NE NE, Section 6-21-11, was good for 4,400 bbls. from sand at 2,203-20 feet.

New Tulsa County Pool.

One new pool was opened in Tulsa County during the first six months of 1924, when the Echo Oil Co. drilled in its No. 1-A Grayson, C SE SE NE, Section 5-19-12, on February 10 about four miles west of Tulsa. Its big pay at 2,028-34 feet was good for 460 bbls. At the end of June, there were 13 producers in the pool and 7 wells were drilling.

The Bruner Pool, in Section 6-19-12, discovered in December of 1923, was developed this year and yielded several wells good for 1,000 to 1,800 bbls. At the end of June there were 20 producers in the pool and three wells drilling. Across the road to the south, however, an active townlot drilling campaign was under way as a result of two producers in the NW NW NW of Section 8-19-12, which made 500 bbls. and 400 bbls. of high gravity oil respectively. Most of the wells in these pools decline sharply as they produce from a lime formation, but others hold up well.

Several Creek County wildcats claimed attention. About February 15, the Independent Oil & Gas Co. opened up a new area with its No. 1 Barnett, SE cor. SW NE, Section 31-14-10, that became known as the Tuskegee Pool. This well made 378 bbls. from sand at 3,446-48 feet. Another good well for this pool was completed about May 10 by the Burke-Greis Oil Co. in its No. 1 Barnett, SW cor. SE NE, Section 31-14-10, which made 595 bbls. initially from sand at 3,414-29 feet. Some others were good and at the end of June several tests were drilling to the east with a good chance of extending the pool into Section 32.

Dutcher Sand Discovered.

Two and a half miles northwest of the Tuskegee Pool, the Phillips Petroleum Co. made a Dutcher Sand discovery about teh firts of June in its No. 1 Mary Penn, SE cor. NW, Section 24-14-9. The importance of this well was not determined at the close of the month as it was making about 40 bbls. from a foot in the sand topped at 2,930 feet and was shut down with some water showing. There was a plenty of room arount it, however, for a new pool. About May 1, the Phillips Petroleum Co.'s No. 1 Robinson, NW cor. SW, Section 29-14-8, had a 50-bbl. showing in sand at 3,040-17 feet. In the latter part of the same month, Wilson, Wiley & Mount found a 250-bbl. Dutcher Sand well in their wildcat, No. 1 Colbert, NE cor. SE NW, Section 29-15-9. Farther north, the Atlantic Oil Producing Co.'s No. 1 Fixico, SW cor. SE SE, Section 29-16-8, topped the Dutcher at 3,250 feet on February 10. Baily and others' No. 1 Willis SE cor. NE, Section 30-18-10, started out like a real find on June 1, making 800 bbls. the first day from sand at 2,652-53 feet, but was down to 60 bbls. on the third day and water broke in.

The Texolean Oil Co. opened a new Wilcox pool about February 20 with its No. 4-A Washington, SW cor. Section 32-17-8, which was good for 500 bbls. from sand at 3,485-3, 520 feet, although it was a twin to the well which really discovered the sand last November but had bad luck and was plugger.

Some large producers were drilled in Creek County in old territory. On February 20, the Lourel Oil & Gas Co.'s No. 4 Knoll, NW cor. NE SW, Section 22-16-8, was deepened and gauged 3,730 bbls. in sand at 3,117-20 feet. The Oklohoma Eastern Oil Co.'s No. 8 Tiger, CSL NW SW, Section 24-16-12, produced 1,905 bbls. on March 15 from sand at 2,230-33 feet. The Cortez Oil Co.'s No. 4 Abraham, SW cor. SE NW, Section 22-16-8, was good for 6,100 bbls. on April 1 from sand at 3,132-35 feet. A freak performance was made by the Peters Oil Corp.'s No. 1 Arsoyales, SE cor. SW NW, Section 22-16-8, which was swabbing 75 bbls. about May 1 and suddenly went on a rampage flowing 200 bbls. hourly for a day or so, then settled back to 35 bbls. an hour.

In Okfuskee County, the Atlantic Oil Producing Co.'s No. 1 Smith, SW cor. NW, Section 35-11-11, was a 200-bbl. well from sand at 2,495-2, 500 feet, about March 1. Basset & Storm's No. 1 Dyer, NE cor. NW, Section 12-13-7, made 40 bbls. from sand at 3,549-71 feet.

The biggest find of the six months in Okfuskee County, however, was due to deeper drilling. About May 1, the Josey Oil Co. topped sand at 2,900 feet in its No. 1 McCray, SE cor. SW NW, Section 33-12-11, and when drilled 10 feet it was good for 1,080 bbls. An active deeper drilling campaign followed this discovery. A well two locations east was dry in the same sand a little later but a good pool was expected to be developed in other directions.

Okmulgee County had a new pool due to the discovery by W.S. McCray in Section 14-13-11. His No. 1 Thompsan. SW cor. SE, was a 420-bbl. well in sand at 2,480-88 feet. This was found about March 15 and several wells were completed around it.

Wagoner County furnished one of the most sensational wells of the season when Johnson, Odell & Young discovered a "grass roots" gusher in their No. - Secrest, C SW NE SW, Section 11-17-16. It flowed 40 bbls. hourly for quite a while from sand topped at 760 feet, and paid for itself every two days for some weeks. Like other Wagoner County finds, it was the inspiration for many dusters, and one offset to it had little more than a smell after two heavy shots, although the other two offsets were fair wells.

State's Deepest Well.

Hughes County was the scene of a new depth record for the State. The Kingwood Oil Co. drilled its No. 1 Barnett, NW cor. NE SW, Section 7-7-10, to 5,281 feet, where it ran into water late in January, and then plugged it back to a shallow gas sand at 650-717 feet which made 2,000,000 feet of gas.

Pontotoc County was stirred about February 1 when a wildcat owned by La Salle and others in the SE cor. NE, Section 31-5-5, made one flow of 70 bbls. from sand at 1,896-1,912 feet. It was a false alarm, however, and the well made a 25-bbl. pumper. The Dixie Oil Co. had hard luck on the acreage it purchased from Gilbert & Clark on the strength of their No. 1 Collins, SE cor. NW, Section 28-3N-4E. freak asphalt well which flowed 200 bbls. and pumped at that rate steadily for some time. Around this well, the Dixie and the Valerius Oil & Gas Co. drilled several dusters.

Pottawatomie County saw a fleeting glimpse of bright days ahead but the vision soon passed. The Day Oil Co. & Ossenbeck had 1,700 feet of oil in their No. 1 James, SE cor. NW NE, Section 9-5-3, at 3,440 feet, but drilled on to contract depth of 3,500 feet without improving its appearance.

Down in Jefferson County, a wild leasing campaign resulted from Clark & Cowden's No. 2 Spring, CSL NW NW, Section 25-6S-6W, but the well made only a 15-bbl. pumper from sand at 2,095, 101 feet. The Hambro Oil Co.'s No. 1-A Seay, SE cor. NE SE, Section 33-6S-5W, pumper 193 bbls. early in June from total depth of 1,373 feet.

Gushers Go Dead.

The Hewitt Field in Carter County provided the most freakish performance of the year and the greatest disappointment when the Carter Oil Co.'s four deep sand gushers in Section 21-4S-2W, which produced as high as 15,000 bbls. in one day, all together, went dead and could not be revived. These included No. 40 Noble, No. 41 Noble, No. 42 Noble and No. 20 Ward.

The Graham Field was extended several times and brought forth several wells in the 1,000-bbl. class or better. The North Fox or Sholem Alechem District was also extended, one of the best wells being Simpson & Fell's No. 1 Parnell, C SW NE NW, Section 34-1S-3W, which topped the sand at 3,606 feet and tunbled 425 bbls. One other well in this pool made over 400 bbls. initially. The most important extension of the Graham Field was made by the Skelly Oil Co. in its No. 1 Davis, C NE SW NW, Section 25-2S-3W, diagonally across a section ahead of production on March 26, and was good for 380 bbls. from sand at 2,153-63 feet, with total depth at 2,220 feet. It dwindled and in July was being swabbed for 150 bbls. daily. A heavy drilling campaign followed it.

Beckham County had a couple of flurries during the half year, but they were short lived. Simpson & Fell's No. 1-A Kight, NW cor SE NW, Section 32-9-23W, was the cause of one about February 1, when it came in for 487 bbls. from sand at 2,920-28 feet, and the Carter Oil Co.'s No. 2 Windle, C SE NW NE, Section 31-91-23w, started on March 1 at 600 bbls. but on the third day was down to 180 bbls. and on July 1 was producing 60 bbls. Some big gassers were found but the market was too limited to make them worth while.

A comparison of the completion records for the first six months of this year and

(Continued on Page 160)

SIGNIFICANT COMPLETIONS OF FIRST SIX MONTHS, 1924—OKLAHOMA

Company Name	Well No.	Farm Name	Location Description	Location S. T. R.	County	Sand Record	Production Bbls. Initial	Found Production Date	Remarks—
Atlantic O. P.	2	———	CSL SW	27-2S- 6	Osage	2,696-98½	3,380	Jan. 15	DISCOVERY—New Wilcox Pool OWDD.
Kingwood	1	Barnett	NWC NE SW	7- 7-10	Hughes	5,281 TD	D&A	Jan. 25	Oklahoma' deepest hole. P. B. to gas sa. 650-717 ft., 2 M gas
Carter	41	Noble	C NE SE NE	21-4s- 2 w	Carter	2,892-99	3,347	Jan. 20	Later went dead with four other deep wells.
Beador	1	Chambers	SWC SE	9-2S- 2 w	Kay	3,403-45	D&A	Feb. 20	HFW. Created great interest for a time.
Tidal-Osage	31	———	NWC SE NW	24-22-10	Osage	2,290-98	6,000	Jan. 19	OWDD—Was 150-bbl. well in sand 2,271-78 ft.
La Salle et al	1	Lewis	SEC NE	31- 5- 5	Pontotoc	1,896-1,912	25	Feb. 1	Created excitement when it made 1 flow of 70 bbls., small pumper
Simpson-Fell	1-A	Knight	NWC SE NW	32- 9-23 w	Beckham	2,920-28	487	Feb. 1	Caused flurry in Beckham County.
Echo Oil	1-A	Grayson	C SE SE NE	5-19-12	Tulsa	2,028-34	460	Feb. 14	DISCOVERY—Vern Pool; 5 M. gas at 1,913-21 ft.
Independent	1	Barnett	SEC SW NE	31-14-10	Creek	3,446-48	378	Feb. 20	DISCOVERY—Tuskegee Pool.
Alcorn	1	Hubbard	CSL NW	12-2S- 2 w	Kay	3,660-3,761	224	Mar. 10	Probably forerunner of pool somewhere in vicinity.
Carter	2	Windle	C SE NW NE	31- 9-23 w	Beckham	2,966-73	600	Mar. 1	Down to 180 bbls. third day; about 60 bbls. June 30.
W. L. McCray	1	Thompson	SWC SE	14-13-11	Okmulgee	2,480-88	420	Mar. 10	DISCOVERY—McCray Pool.
Young et al	1	Secrest	CSW NE SW	11-17-16	Wagoner	Top 760	1,000	Mar. 12	DISCOVERY—"Grass roots" gusher; caused dusters.
Cortez	4	Abraham	SWC SE NW	22-16- 8	Creek	3,132-35	6,100	Mar. 25	Biggest Creek County gusher of six months.
Skelly	1	Davis	C NE SW NW	25-2s- 3 w	Carter	2,153-61	380	Mar. 26	Important Graham extension; swabbing 150 bbls. July 1.
Dixie	5-A	Long	NWC SW SE NE	12- 8- 8	Seminole	3,875-85	70	Apr. 1	Found deep Wewoka sand but didn't amount to much.
Josey	1	McCray	SEC NW NW	33-12-11	Okfuskee	2,900-10	1,080	Apr. 25	OWDD—Caused much deeper drilling; 800 bbls. July 1.
C. W. Titus	3	———	NEC NW NE NE	6-21-11	Osage	2,203-20	4,400	Apr. 26	Big Osage County gusher.
Otstot Dev.	1	Shimp	NEC NW	20- 29- 1 e	Kay	170-186	3 M gas	May 1	One of shallowest gas sands in State.
Marland	2	———	NWC	24-25- 8	Osage	2,686-87	7,000	May 6	2,160 bbls. in 8 hours, partially shut in; Pawhuska Pool.
Superior	1	———	SEC SW	3-23- 8	Osage	2,569-70	4,320	May 8	DISCOVERY—New Wilcox Pool; down to 250 bbls. July 1.
Wilson, Wiley, et al	1	Colbert	NEC SE NW	29-15- 9	Creek	3,102	250	May 20	Dutcher sand wildcat.
Phillips Pet.	1	Penn	SEC NW	24-14- 9	Creek	2,930	40	June 2	Has been shut down; made some water; wildcat.
Day & Ossenbeck	1	James	SEC NW NE NE	9- 5- 3	Pottawatomie	3,440	1,700'OIH	June 1	Passed good show; SD 3,500 ft., contract depth July 1.
Berry Pet	1	Meadows	SWC NW SE	4- 7- 9	Hughes	3,321-26	2,868	June 3	Biggest well in Papoose Pool; averaged 2,760 daily for week.
T.B Slick-Comar	1-SS.	L. Endicott	SWC	35-2S- 1 w	Kay	4,060-85	2,870	Apr. 8	DISCOVERY—Deep Tonkawa sand.
Marland	1	Thomas	SWC	15-2S- 2 w	Kay	2,061-66	300	May 15	DISCOVERY—New pool NW of Tonkawa.
Simpson-Fell	1	Parnell	CSW NE NW	34-1s- 3 w	Carter	Top 3,606	425	June 17	Sholem Alachem Field extension 1 mile SE.
Comar	1	Duncan	NEC SW	21-2S- 1 w	Kay	1,930-34	65	June 20	Rank wildcat; may open new pool; 30 M. at 1,880 ft.
Jones&Jenkins	1	Tiger	NEC SE SE	8-14-10	Creek	232-287	50	Apr. 5	Shallow freak, 50.4° gravity.
Clark & Cowden	2	Spring	CSL NW NW	25-6s- 6 w	Jefferson	2,095-2,101	17	Mar. 5	Caused wild leasing but made small pumper.
Bradstreet	1	———	CSW	9-2S- 9 w	Major	1,160	½ M gas	Apr. 10	Wildcat (rank); drilling 2,500 ft. July 1.
Alcorn	1	North	NW NE NE	12-2S- 2 w	Kay	2,539-42	64 M gas	June 28	Looks like forerunner of new pool.
Barnsdall	16	———	SEC NE NW NW	32-21-12	Osage	1,938-40	4,300	June 30	Sensational 50° gravity gusher.
Comar	1	Williams	NEC SE NE	7-2T- 2	Kay	3,687	1,000'OIH	June 15	Wildcat with good showing.
Ramsay Oil	2	———	NW SE	22-29-13	Washington	1,660-61	1,000	Mar. 11	Big well in old territory.
Selby O. & G.	1	———	SEC NW	31-19- 9	Creek	3,087	360	June 8	DISCOVERY—Wilcox Pool near Mannford.
					KANSAS				
Wilson & Martin	1	Eastman	SWC	5-31- 6	Cowley	2,850-54	360	Jan. 1	DISCOVERY—Eastman Pool; old gas well DD.
Twin State	1	Hilbert	SEC NW	6-23- 5	Butler	3,110	abd	Mar. 1	Had 2 M. gas and was source of interest.
Hipple & Childs	1	Welch	SEC SW NW	35-20- 6w	Rice	3,370-3,405	140	Feb. 15	DISCOVERY—Rice County excitement.
Alcorn	1	Wood	NEC	9-33- 3	Cowley	3,510-15	303	June 30	DISCOVERY—Wilcox horizon.
Marland	1	Young	SEC NE	33-32- 2	Sumner	3,555 TD	D&A	June 20	Interesting wildcat; good showing; watched closely.
W.Phillips et al	1	Wertman	CSW SW NE	20-33- 3	Cowley	3,182-3,206	1,844	May 25	Best well 'n Rainbow Bend Pool to June 30.
L.R.Page et al	1	Malone	CSL SW NE	18-32-10	Chautauqua	2,345-50	1,000	May 20	DISCOVERY—Wilcox; shut down; no connections.
Phillips Pet.	11	Lewis	SEC SW NW	32-23-10	Greenwood	2,242-92	750	May 11	Best producer in Thrall Pool.
Orlando Pet.	1	Breitkrantz	SWC NE SW	4-24-10	Greenwood	4,800	abd	May 12	One of deepest holes in State.
S.&S.& Derby	1	Oswald	SEC SW SW	8-12-15 w	Russell	2,947-48	785	June 14	Best in Russell Pool.
Trees Bros.	1	Urban	NEC SE	10-31- 3	Cowley	3,042-54	50	June 12	DISCOVERY—B'g companies bought acreage.
Empire G. & F.	3	Eastman	CNE SE SE	6-31- 6	Cowley	2,824-34	738	June 10	Best in Eastman Pool.
Red Bank	1	Coleman	SWC SE	28-32-14	Montgomery	1,682-86	4,000	July 2	DISCOVERY—Wilcox sand; pinched in to 800 bbls.
J. A. Hull	7	Deifelder	CWL NW SE	24-32- 4	Cowley	3,003-32½	265	June 20	DISCOVERY—Bartlesville sand in old pool; trouble with cave

OWD—Old well drilled deeper; PB—Plugged back; HFW—Hole full of water; SD—Shut down; OIH Oil in hole.

NEW LOW LEVEL HIT IN COASTAL MARKET

HOUSTON, Tex., July 28.—Houston gasoline is holding steady at 20 cents filling station and 17 cents tank wagon. Most of the coast refineries ship their gasoline coastwise and for export and have little or no competition, the business being about equally divided between the larger independents and they seem better able to hit it off amicably than when bothered by an army of small independents, who must move their stocks pronto in order to keep going.

Other refined products, however, hit a new low level the past week as a further result of the 50 cent cut in coastal heavy crude oils, registered the middle of the month. The reductions ranged from 1 to 2 cents, 1 cent generally on the low viscosity oils and 2 cents on the higher grades.

Refiners report inquiries and orders slow, but also declare the cuts have stimulated buying to an appreciable degree and that business as a consequence is good. A is quite noticeable activity is seen, especially in the higher viscosity oils and the bright stocks are well up in price, compared with a year ago.

One refiner is authority for the statement that the activity in higher viscosity oils is attributed to the new automotive motors using heavier oil. The new motors have a higher compression and a resultant higher temperature, thus calling for heavier oils.

The activity is confined almost exclusively to domestic trade, the export business still sticking to the doldrums.

CRUDE REDUCTIONS AGAIN UPSET MARKET

(Continued from Page 22)

present spot prices. Due to the heavy purchases, several manufacturers boosted their low Grade A price to 7½ cents. However, small buyers were still able to buy at a low of 7¼ cents both for immediate and future delivery. At least two concerns are asking the same for Grade B and A. Cosden & Co. paid 8 cents for Grade C delivered at their West Tulsa plant last week. The company got out of the market and it is understood that the same product has been offered the company at ½-cent lower price. The general market on the product remains the same, however.

Neutrals and Wax

Following the crude reductions, the trade was speculating as to whether it would result in another general revision downward of neutral prices. Cosden & Co. had not announced any change up to Wednesday. Some improvement in movement was reported by a few plants during the past week but neutrals generally still occupy a weak position. Wax prices have again advanced slightly. Cylinder stocks are unchanged.

NATURAL GASOLINE UP IN CALIFORNIA MARKET

LOS ANGELES, Cal., July 26.—During the past few days a scarcity of natural gasoline has developed. This is the result of a combination of summer demand for motor gasoline on the Pacific Coast, together with heavy purchases by the Shell Co. of California and the General Petroleum Corp. for the blending of export cargoes. As a result, the price has been forced from a low of 9 cents per gallon a few weeks ago to a low of 10½ cents at present. So far as can be determined, all natural gasoline being sold at present, both contract and spot, is moving at a price varying from 10½ cents to 11 cents.

New Navy gasoline has stiffened somewhat. The refineries of Southern California are supplying this commodity in cars f.o.b. plant at prices varying from 11 cents to 12 cents. The spread of 1 cent is accounted for by the fact that a considerable portion of the trade will stand the 12-cent price, while at the same time there are a number of refining companies with very large inventories anxious to reduce them in anticipation of winter. In order to force sales in this way, liberal price concessions are being made. There are still a large number of so-called "bootleg distributors" operating in southern California, and despite the present unprecedentedly large gasoline sales, service station prices still range between 19 cents and 13 cents per gallon, tax paid.

Engine distillate is moving from California to the Atlantic Seaboard in large volume but local sales are practically nill Very little kerosene is being made and stocks accumulated last fall are still being drawn on to meet current requirements. Kerosene prices are low, but holding steady at the established levels. The high grade domestic product is moving at 7½ cents to 8 cents f.o.b refinery, and export kerosene at 4 cents to 4½ cents.

No change is noticeable in the heavy distillates and fuel oil.

Lubricating oil sales are very satisfactory, particularly in the motor grades. There has been no tendency to revise prices. The present level is being well maintained, spreads between the various companies not exceeding 2 cents in the standard grades.

SHELL CO. CONTRACT WITH ANGLO-MEXICAN

LOS ANGELES, Cal., July 26.—It is reliably reported that the Shell Co. of California has closed a long term contract with the Anglo-Mexican Petroleum Co. for the delivery of gasoline from California for British consumption. The exact total of the contemplated deliveries is not known, but it is stated two cargoes per month will be shipped for next year. The Anglo-Mexican Petroleum Co. formerly was supplied by Mexican Petroleum and during the last few months has taken much of its refined products from the General Petroleum.

The new contract with the Shell Co. calls for an exceptionally high grade of gasoline with a low end point. The first effect of this contract on the California trade has been a vigorous campaign on the part of the Shell Co. to tie up practically all the accessible independently marketed natural gasoline in the big Southern California Fields. This has served to stiffen the natural gasoline market within the last week.

VETERAN DRILLER DIES

CHATHAM, Ont., July 26.—Charles A. Johnston, formerly a well-known driller in foreign fields, died recently at Sarnia, Ont., aged 62, following a paralytic stroke. Mr. Johnson was born at Lexington, Mich., and came to Petrolia with his parents in the boom days 60 years ago. He followed the occupation of driller, spending some years in foreign fields, his home being in Petrolia until three years ago, when he moved to Sarnia.

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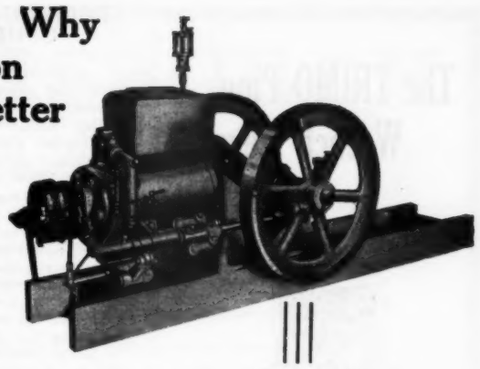

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New York Pittsburgh Chicago Denver Birmingham

horizon the last day of June and flowed 4,300 bbls. of 50 gravity crude in its first 24 hours. Sand was found at 1,938-40 feet. In the same section, late in April, the same company had completed its No. 17, NW cor., for 1,100 bbls. of 52 gravity oil in sand at 1,933-38 feet, and its No. 22 in the NE cor. Section 31-21-12, was good for 1,450 bbls. of 48-7 degree oil on March 15.

Some old wells were deepened in the Osage with surprising results. Early in January, the Tidal-Osage Oil Co. deepened its No. 31, in the SE of Section 34-22-10, resulting in 94 bbls. an hour output from sand at 2,256-92 feet. Later in the month, the same company deepened its No. 34, in the NW of the same section, and it made 165 bbls. an hour from sand at 2,309-15 feet. The former well was again deepened to 2,298 feet and responded with 6 000 bbls production. Late in April, C. W. Titus and others' No. 3, NE cor. NW NE NE, Section 6-21-11, was good for 4,400 bbls. from sand at 2,203-20 feet.

New Tulsa County Pool.

One new pool was opened in Tulsa County during the first six months of 1924, when the Echo Oil Co. drilled in its No. 1-A Grayson, C SE SE NE, Section 5-19-12, on February 10 about four miles west of Tulsa. Its big pay at 2,028-34 feet was good for 460 bbls. At the end of June, there were 13 producers in the pool and 7 wells were drilling.

The Bruner Pool, in Section 6-19-12, discovered in December of 1923, was developed this year and yielded several wells good for 1,000 to 1,800 bbls. At the end of June there were 20 producers in the pool and three wells drilling. Across the road to the south, however, an active townlot drilling campaign was under way as a result of two producers in the NW NW NW of Section 8-19-12, which made 500 bbls. and 400 bbls. of high gravity oil respectively. Most of the wells in these pools decline sharply as they produce from a lime formation, but others hold up well.

Several Creek County wildcats claimed attention. About February 15, the Independent Oil & Gas Co. opened up a new area with its No. 1 Barnett, SE cor. SW NE, Section 31-14-10, that became known as the Tuskegee Pool. This well made 378 bbls. from sand at 3,446-48 feet. Another good well for this pool was completed about May 10 by the Burke-Greis Oil Co. in its No. 1 Barnett, SW cor. SE NE, Section 31-14-10, which made 595 bbls. initially from sand at 3,414-29 feet. Some others were good and at the end of June several tests were drilling to the east with a good chance of extending the pool into Section 32.

Dutcher Sand Discovered.

Two and a half miles northwest of the Tuskegee Pool, the Phillips Petroleum Co. made a Dutcher Sand discovery about teh firts of June in its No. 1 Mary Penn, SE cor. NW, Section 24-14-9. The importance of this well was not determined at the close of the month as it was making about 40 bbls. from a foot in the sand topped at 2,930 feet and was shut down with some water showing. There was a plenty of room around it, however, for a new pool. About May 1, the Phillips Petroleum Co.'s No. 1 Robinson, NW cor. SW, Section 29-14-8, had a 50-bbl. showing in sand at 3,040-17 feet. In the latter part of the same month, Wilson, Wiley & Mount found a 250-bbl. Dutcher Sand well in their wildcat, No. 1 Colbert, NE cor. SE NW, Section 29-15-9. Farther north, the Atlantic Oil Producing Co.'s No. 1 Fixico, SW cor. SE SE, Section 29-16-8, topped the Dutcher at 3,250 feet on February 10. Baily and others' No. 1 Willis SE cor. NE, Section 30-18-10, started out like a real find on June 1, making 800 bbls. the first day from sand at 2,652-53 feet, but was down to 60 bbls. on the third day and water broke in.

The Texolean Oil Co. opened a new Wilcox pool about February 20 with its No. 4-A Washington, SW cor. Section 32-17-8, which was good for 500 bbls. from sand at 3,485-3, 520 feet, although it was a twin to the well which really discovered the sand last November but had bad luck and was plugger.

Some large producers were drilled in Creek County in old territory. On February 20, the Lourel Oil & Gas Co.'s No. 4 Knoll, NW cor. NE SW, Section 22-16-8, was deepened and gauged 3.730 bbls. in sand at 3.117-20 feet. The Oklohoma Eastern Oil Co.'s No. 8 Tiger, CSL NW SW, Section 24-16-12, produced 1,905 bbls. on March 15 from sand at 2,230-33 feet. The Cortez Oil Co.'s No. 4 Abraham, SW cor. SE NW, Section 22-16-8, was good for 6.100 bbls. on April 1 from sand at 3.132-35 feet. A freak performance was made by the Peters Oil Corp.'s No. 1 Arsoyales, SE cor. SW NW, Section 22-16-8, which was swabbing 75 bbls. about May 1 and suddenly went on a rampage flowing 200 bbls. hourly for a day or so, then settled back to 35 bbls. an hour.

In Okfuskee County, the Atlantic Oil Producing Co.'s No. 1 Smith, SW cor. NW, Section 35-11-11, was a 200-bbl. well from sand at 2,495-2, 500 feet, about March 1. Basset & Storm's No. 1 Dyer, NE cor. NW, Section 12-13-7, made 40 bbls. from sand at 3.549-71 feet.

The biggest find of the six months in Okfuskee County, however, was due to deeper drilling. About May 1, the Josey Oil Co. topped sand at 2.900 feet in its No. 1 McCray, SE cor. SW NW, Section 33-12-11, and when drilled 10 feet it was good for 1,080 bbls. An active deeper drilling campaign followed this discovery. A well two locations east was dry in the same sand a little later but a good pool was expected to be developed in other directions.

Okmulgee County had a new pool due to the discovery by W.S. McCray in Section 14-13-11. His No. 1 Thompsan, SW cor. SE, was a 420-bbl. well in sand at 2,480-88 feet. This was found about March 15 and several wells were completed around it.

Wagoner County furnished one of the most sensational wells of the season when Johnson, Odell & Young discovered a "grass roots" gusher in their No. - Secrest, C SW NE SW, Section 11-17-16. It flowed 40 bbls. hourly for quite a while from sand topped at 760 feet, and paid for itself every two days for some weeks. Like other Wagoner County finds, it was the inspiration for many dusters, and one offset to it had little more than a smell after two heavy shots, although the other two offsets were fair wells.

State's Deepest Well.

Hughes County was the scene of a new depth record for the State. The Kingwood Oil Co. drilled its No. 1 Barnett, NW cor. NE SW, Section 7-7-10, to 5,281 feet, where it ran into water late in January, and then plugged it back to a shallow gas sand at 650-717 feet which made 2,000,000 feet of gas.

Pontotoc County was stirred about February 1 when a wildcat owned by La Salle and others in the SE cor. NE, Section 31-5-5, made one flow of 70 bbls. from sand at 1,896-1,912 feet. It was a false alarm, however, and the well made a 25-bbl. pumper. The Dixie Oil Co. had hard luck on the acreage it purchased from Gilbert & Clark on the strength of their No. 1 Collins, SE cor. NW, Section 28-3N-4E. freak asphalt well which flowed 200 bbls. and pumped at that rate steadily for some time. Around this well, the Dixie and the Valerius Oil & Gas Co. drilled several dusters.

Pottawatomie County saw a fleeting glimpse of bright days ahead but the vision soon passed. The Day Oil Co. & Ossenbeck had 1,700 feet of oil in their No. 1 James, SE cor. NW NE, Section 9-5-3, at 3,440 feet, but drilled on to contract depth of 3,500 feet without improving its appearance.

Down in Jefferson County, a wild leasing campaign resulted from Clark & Cowden's No. 2 Spring, CSL NW NW, Section 25-6S-6W, but the well made only a 15-bbl. pumper from sand at 2,095, 101 feet. The Hambro Oil Co.'s No. 1-A Seay, SE cor. NE SE, Section 33-6S-5W, pumper 193 bbls. early in June from total depth of 1,373 feet.

Gushers Go Dead.

The Hewitt Field in Carter County provided the most freakish performances of the year and the greatest disappointment when the Carter Oil Co.'s four deep sand gushers in Section 21-4S-2W, which produced as high as 15,600 bbls. in one day, all together, went dead and could not be revived. These included No. 40 Noble, No. 41 Noble, No. 42 Noble and No. 20 Ward.

The Graham Field was extended several times and brought forth several wells in the 1,000-bbl. class or better. The North Fox or Sholem Alechem District was also extended, one of the best wells being Simpson & Fell's No. 1 Parnell, C SW NE NW, Section 34-18-3W, which topped the sand at 3,606 feet and tanked 425 bbls. One other well in this pool made over 400 bbls. initially. The most important extension of the Graham Field was made by the Skelly Oil Co. in its No. 1 Davis, C NE SW NW, Section 25-2S-3W, diagonally across a section ahead of production on March 26, and was good for 380 bbls. from sand at 2,153-63 feet, with total depth at 2,230 feet. It dwindled and in July was being swabbed for 150 bbls. daily. A heavy drilling campaign followed it.

Beckham County had a couple of flurries during the half year, but they were short lived. Simpson & Fell's No. 1-A Kight, NW cor SE NW. Section 32-9-23W, was the cause of one about February 1, when it came in for 487 bbls. from sand at 2,920-28 feet, and the Carter Oil Co.'s No. 2 Windle, C SE NW NE, Section 31-9I-23w, started on March 1 at 600 bbls. but on the third day was down to 180 bbls. and on July 1 was producing 60 bbls. Some big gassers were found but the market was too limited to make them worth while.

A comparison of the completion records for the first six months of this year and

(Continued on Page 160)

SIGNIFICANT COMPLETIONS OF FIRST SIX MONTHS, 1924—OKLAHOMA

Company Name	Well No.	Farm Name	Location Description	Location S	T.	R.	County	Sand Record	Production Bbls. Initial	Found Production Date	Remarks—
Atlantic O. P.	2	———	CSL SW	27-25-	8		Osage	2,696-98½	3,380	Jan. 15	DISCOVERY—New Wilcox Pool OWDD.
Kingwood	1	Barnett	NWC NE SW	7-	7-10		Hughes	5,281 TD	D&A	Jan. 25	Oklahoma' deepest hole. P. B to gas ss. 650-717 ft., 2 M gas
Carter	41	Noble	C NE SE NE	21-4s-	2 w		Carter	2,892-99	3,347	Jan. 20	Later went dead with four other deep wells.
Besdor	1	Chambers	SWC SE	9-25-	2 w		Kay	3,403-45	D&A	Feb. 20	HFW. Created great interest for a time.
Tidal-Osage	31	———	NWC SE NW	34-22-10			Osage	2,290-98	6,000	Jan. 19	OWDD—Was 150-bbl. well in sand 2,271-78 ft.
La Salle et al	1	Lewis	SEC NE	31-	5-	5	Pontotoc	1,896-1,912	25	Feb. 1	Created excitement when it made 1 flow of 70 bbls., small pumper
Simpson-Fell	1-A	Knight	NWC SE NW	32-	9-23	w	Beckham	2,920-28	487	Feb. 1	Caused flurry in Beckham County.
Echo Oil	1-A	Grayson	C SE SE NE	5-19-12			Tulsa	2,028-34	460	Feb. 14	DISCOVERY—Vern Pool; 5 M. gas at 1,913-21 ft.
Independent	1	Barnett	SEC SW NE	31-14-10			Creek	3,446-48	378	Feb. 20	DISCOVERY—Tuskegee Pool.
Alcorn	1	Hubbard	CSL NW	12-26-	2 w		Kay	3,660-3,761	224	Mar. 10	Probably forerunner of pool somewhere in vicinity.
Carter	2	Windle	C SE NW NE	31-	9-23	w	Beckham	2,966-73	600	Mar. 1	Down to 180 bbls. third day; about 60 bbls. June 30.
W. L. McCray	1	Thompson	SWC SE	14-13-11			Okmulgee	2,480-88	420	Mar. 10	DISCOVERY—McCray Pool.
Young et al	1	Secrest	CSW NE SW	11-17-16			Wagoner	Top 760	1,000	Mar. 12	DISCOVERY—"Grass roots" gusher; caused dusters.
Cortez	4	Abraham	SWC SE NW	22-16-	8		Creek	3,132-35	6,100	Mar. 25	Biggest Creek County gusher of six months.
Skelly	1	Davis	C NE SW NW	25-2s-	3 w		Carter	2,153-61	380	Mar. 26	Important Graham extension; swabbing 150 bbls. July 1.
Dixie	5-A	Long	NWC SW SE NE	32-	8-	8	Seminole	3,875-85	70	Apr. 1	Found deep Wewoka sand but didn't amount to much.
Josey	1	McCray	SEC SW NW	33-12-11			Okfuskee	2,900-10	1,080	Apr. 25	OWDD—Caused much deeper drilling; 800 bbls. July 1.
C. W. Titus	3	———	NEC NW NE NE	6-21-11			Osage	2,203-20	4,400	Apr. 26	Big Osage County gusher.
Otstot Dev.	1	Shimp	NEC NW	20-	29-	1 e	Kay	170-186	3 M gas	May 1	One of shallowest gas sands in State.
Marland	2	———	NWC	34-25-	8		Osage	2,686-87	7,000	May 6	2,160 bbls. in 8 hours, partially shut in; Pawhuska Pool.
Superior	1	———	SEC SW	3-23-	8		Osage	2,569-70	4,320	May 8	DISCOVERY—New Wilcox Pool; down to 250 bbls. July 1.
Wilson, Wiley, et al	1	Colbert	NEC SE NW	29-15-	9		Creek	3,102	250	May 20	Dutcher sand wildcat.
Phillips Pet.	1	Penn	SEC NW	24-14-	9		Creek	2,930	40	June 2	Has been shut down; made some water; wildcat.
Day & Ossenbeck	1	James	SEC NW NE NE	9-	5-	3	Pottawatomie	3,440	1,700'OIH	June 1	Passed good show; SD 3,500 ft. contract depth July 1.
Berry Pet	1	Meadows	SEC NW SE	4-	7-	9	Hughes	3,321-26	2,868	June 10	Biggest well in Papoose Pool; averaged 2,760 daily for week.
T.B Slick-Comar	1-SS.	L. Endicott	SWC	35-25-	1 w		Kay	4,060-85	2,870	Apr. 8	DISCOVERY—Deep Tonkawa sand.
Marland	1	Thomas	SWC	15-25-	2 w		Kay	2,061-66	300	May 15	DISCOVERY—New pool NW of Tonkawa.
Simpson-Fell	1	Parnell	CSW NE NW	34-18-	3 w		Carter	Top 3,606	425	June 17	Sholem Alachem Field extension 1 mile SE.
Comar	1	Duncan	NEC SW	21-28-	1 w		Kay	1,930-34	65	June 20	Rank wildcat; may open new pool; 30 M. at 1,880 ft.
Jones&Jenkins	1	Tiger	NEC SE SE	8-14-10			Creek	282-287	50	Apr. 5	Shallow freak, 50.4° gravity.
Clark & Cowden	2	Spring	CSL NW NW	25-6s-	6 w		Jefferson	2,095-2,101	17	Mar. 5	Caused wild leasing but made small pumper.
Bradstreet	1	———	CSW	9-22-	9 w		Major	1,160	½ M gas	Apr. 10	Wildcat (rank); drilling 2,500 ft. July 1.
Alcorn	1	North	NW NE NE	12-26-	2 w		Kay	2,539-43	64 M gas	June 28	Looks like forerunner of new pool.
Barnsdall	16	———	SEC NE NW NW	32-21-12			Osage	1,938-40	4,300	June 30	Sensational 50° gravity gusher.
Comar	1	Williams	NEC SE NE	7-27-	2		Kay	3,687	1,000'OIH	June 15	Wildcat with good showing.
Ramsay Oil	2	———	NW SE	22-29-13			Washington	1,660-61	1,000	Mar. 11	Big well in old territory.
Selby O. & G.	1	———	SEC NW	31-19-	9		Creek	3,087	360	June 8	DISCOVERY—Wilcox Pool near Mannford.
							KANSAS				
Wilson & Martin	1	Eastman	SWC	5-31-	6		Cowley	2,850-54	360	Jan. 1	DISCOVERY—Eastman Pool; old gas well DD.
Twin State	1	Hilbert	SEC NW	6-23-	5		Butler	3,110	abd	Mar. 1	Had 2 M. gas and was source of interest.
Hipple & Childs	1	Welch	SEC SW NW	25-20-	6w		Rice	3,370-3,405	140	Feb. 15	DISCOVERY—Rice County excitement.
Alcorn	1	Wood	NEC	9-33-	3		Cowley	3,510-15	303	June 30	DISCOVERY—Wilcox horizon.
Marland	1	Young	SEC NE	33-32-	2		Sumner	3,555 TD	D&A	June 20	Interesting wildcat; good showing; watched closely.
W.Phillips et al	1	Wertman	CSW SW NE	20-33-	3		Cowley	3,182-3,206	1,844	May 25	Best well 'n Rainbow Bend Pool to June 30.
L.R.Page et al	1	Malone	CSL SW NE	18-32-10			Chautauqua	2,345-50	1,000	May 20	DISCOVERY—Wilcox; shut down; no connections.
Phillips Pet.	11	Lewis	SEC SW NW	32-23-10			Greenwood	2,242-92	750	May 11	Best producer in Thrall Pool.
Orlando Pet.	1	Breitkrantz	SWC NE SW	4-24-10			Greenwood	4,800	abd	May 12	One of deepest holes in State.
S.&S.& Derby	1	Oswald	SEC SW SW	8-12-15	w		Russell	2,947-48	785	June 14	Best in Russell Pool.
Trees Bros.	1	Urban	NEC SE	10-31-	3		Cowley	3,042-54	50	June 12	DISCOVERY—B'g companies bought acreage.
Empire G. & F.	2	Eastman	CNE SE SE	6-31-	6		Cowley	2,824-34	738	June 10	Best in Eastman Pool.
Red Bank	1	Coleman	SWC SE	28-32-14			Montgomery	1,682-86	4,000	July 2	DISCOVERY—Wilcox sand; pinched in to 800 bbls.
J. A. Hull	7	Delfelder	CWL NW SE	24-32-	4		Cowley	3,003-32½	265	June 20	DISCOVERY—Bartlesville sand in old pool; trouble with [illegible]

OWD—Old well drilled deeper; PB—Plugged back; HFW—Hole full of water; SD—Shut down; OIH Oil in hole.

NEW LOW LEVEL HIT IN COASTAL MARKET

HOUSTON, Tex., July 28.—Houston gasoline is holding steady at 20 cents filling station and 17 cents tank wagon. Most of the coast refineries ship their gasoline coastwise and for export and have little or no competition, the business being about equally divided between the larger independents and they seem better able to hit it off amicably than when bothered by an army of small independents, who must move their stocks pronto in order to keep going.

Other refined products, however, hit a new low level the past week as a further result of the 50 cent cut in coastal heavy crude oils, registered the middle of the month. The reductions ranged from 1 to 2 cents, 1 cent generally on the low viscosity oils and 2 cents on the higher grades.

Refiners report inquiries and orders slow, but also declare the cuts have stimulated buying to an appreciable degree and that business as a consequence is good. A is quite noticeable activity is seen, especially in the higher viscosity oils and the bright stocks are well up in price, compared with a year ago.

One refiner is authority for the statement that the activity in higher viscosity oils is attributed to the new automotive motors using heavier oil. The new motors have a higher compression and a resultant higher temperature, thus calling for heavier oils.

The activity is confined almost exclusively to domestic trade, the export business still sticking to the doldrums.

CRUDE REDUCTIONS AGAIN UPSET MARKET

(Continued from Page 22)

present spot prices. Due to the heavy purchases, several manufacturers boosted their low Grade A price to 7½ cents. However, small buyers were still able to buy at a low of 7¼ cents both for immediate and future delivery. At least two concerns are asking the same for Grade B and A. Cosden & Co. paid 8 cents for Grade C delivered at their West Tulsa plant last week. The company got out of the market and it is understood that the same product has been offered the company at ½-cent lower price. The general market on the product remains the same, however.

Neutrals and Wax

Following the crude reductions, the trade was speculating as to whether it would result in another general revision downward of neutral prices. Cosden & Co. had not announced any change up to Wednesday. Some improvement in movement was reported by a few plants during the past week but neutrals generally still occupy a weak position. Wax prices have again advanced slightly. Cylinder stocks are unchanged.

NATURAL GASOLINE UP IN CALIFORNIA MARKET

LOS ANGELES, Cal., July 26.—During the past few days a scarcity of natural gasoline has developed. This is the result of a combination of summer demand for motor gasoline on the Pacific Coast, together with heavy purchases by the Shell Co. of California and the General Petroleum Corp. for the blending of export cargoes. As a result, the price has been forced from a low of 9 cents per gallon a few weeks ago to a low of 10½ cents at present. So far as can be determined, all natural gasoline being sold at present, both contract and spot, is moving at a price varying from 10½ cents to 11 cents.

New Navy gasoline has stiffened somewhat. The refineries of Southern California are supplying this commodity in cars f.o.b. plant at prices varying from 11 cents to 12 cents. The spread of 1 cent is accounted for by the fact that a considerable portion of the trade will stand the 12-cent price, while at the same time there are a number of refining companies with very large inventories anxious to reduce them in anticipation of winter. In order to force sales in this way, liberal price concessions are being made. There are still a large number of so-called "bootleg distributors" operating in southern California, and despite the present unprecedentedly large gasoline sales, service station prices still range between 19 cents and 13 cents per gallon, tax paid.

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The new contract with the Shell Co. calls for an exceptionally high grade of gasoline with a low end point. The first effect of this contract on the California trade has been a vigorous campaign on the part of the Shell Co. to tie up practically all the accessible independently marketed natural gasoline in the big Southern California Fields. This has served to stiffen the natural gasoline market within the last week.

VETERAN DRILLER DIES

CHATHAM, Ont., July 26.—Charles A. Johnston, formerly a well-known driller in foreign fields, died recently at Sarnia, Ont., aged 62, following a paralytic stroke. Mr. Johnson was born at Lexington, Mich., and came to Petrolia with his parents in the boom days 60 years ago. He followed the occupation of driller, spending some years in foreign fields, his home being in Petrolia until three years ago, when he moved to Sarnia.

CLASSIFIED WANTS

FOR SALE—PETS

REGISTERED Bull Pups—Bulldog Park, 501 Rockwood, Dallas, Texas.

STANDARD FORMS

CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of Gas Meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.

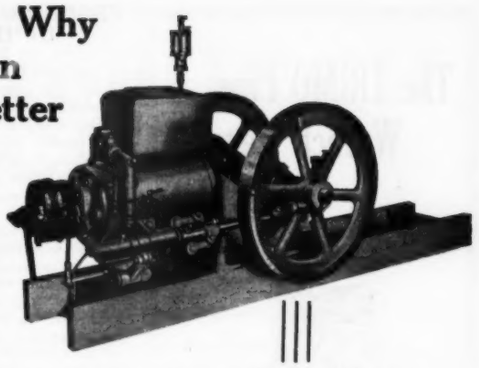
DERRICK PUBLISHING CO.
Oil City, Penn.

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letterhead gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

OLD FRIENDS

BILLIE WHITSON—Will you please let us know where you are as Mamma and I need you. Rozella. Address 435 W. 42nd St., Los Angeles, Calif.

10 Reasons Why The Jacobson Engine Is Better



All parts of best material and are interchangeable; all bearings are die cast.

Over-size magneto eliminates batteries and spark plugs and insures prompt starting under all conditions.

Positive, quiet side shaft governors, driven by helical gears.

Vertical type valve reduces side wear on guides that are interchangeable.

Choice of fuels: Natural or artificial gas, gasoline, or kerosene.

Range of power: Made in nine sizes, from 1½ to 16 horsepower.

Thermo-syphon water cooling system keeps engine working most efficiently.

Records of satisfactory service covering 20,000 Engines doing difficult jobs and receiving minimum care.

Twenty years of experience at specializing in a single type of engine building.

Because of this specialization we can make our prices low without sacrifice of quality.

Immediate Delivery of Engines.

Spare Parts by Return Mail.

Particulars and Prices Gladly Given Upon Request.

Jacobson Engine Works
Titusville, Pa.

JACOBSON ENGINES

Hazard Wire Lines

Over three-quarters of a century of Wire Rope making is back of Hazard Wire Lines, and intensive study of modern oil field practice has enabled us to perfect them for present day drilling.

Full stocks of Drilling, Sand and Casing Lines at the following agencies and all their branch stores:

THE BOVAIRD SUPPLY CO.
Tulsa, Okla.

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DANSER MFG. & SUPPLY CO.
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PRICHARD SUPPLY CO.
Mannington, W. Va.

WALTER C. HILL
711 Midwest Bldg., Casper, Wyo.

BUCK & STODDARD
Los Angeles, Calif.

LONGHART SUPPLY CO., First National Bank Bldg., Fort Worth, Tex.

Hazard Manufacturing Co.

General Office and Works: WILKES-BARRE, PA.

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The TRIMO Pipe Wrench Never Wears Out

Eight Sizes
ins. to 48 ins.

The TRIMO Pipe Wrench is the strongest wrench made. It takes years of hard service to make it show signs of wear.

But even when the jaws finally become dulled or worn they can be readily replaced at low cost, making the wrench as good as new. The insert jaw in the handle is an exclusive TRIMO feature. It makes the TRIMO the most economical wrench as well as the finest. Be sure to ask your dealer for a TRIMO.

TRIMONT MFG. CO.
Roxbury, Mass.

TRIMO

7100

CRACKING POLICY IS UPHELD BY TEXAS CO.

(Continued from Page 25)

time and place and by the wrong expender.

But there are some general aspects of the matter which all of us can understand, and it may not be inappropriate to touch upon them here and now.

Not Serious to Company

First of all, it is clear that the suit, even if successful, would not be very serious to our company. Not being a suit to recover money or property, but being one affecting only a course of conduct, it can be viewed quite philosophically. Principal, to be sure, is not to be forgotten or laid aside for money, but when no moral turpitude is involved, or even a charge of poor sportsmanship, we can afford to go about our business and sleep soundly while the courts of the country are reaching their final pronouncement as to whether we may or may not insert and insist upon certain clauses in licenses issued to other refiners.

No Effort to Cancel Patents

The patents in question were issued by the Government, through a branch or bureau skilled in patent matters, the only one so skilled. And, while in this case there is an allegation that the principal of cracking is old, it is noticeable that no effort is made to cancel the patents. The principal or fact of electricity is old, yet even now we are not at the end of its development, and when one contemplates the hundreds of patents held by each of numerous large companies in the electrical industries, the paths that the courts have marked out for each to travel without encroaching upon the rights of others, one realizes that there was not complete anticipation by Benjamin Franklin.

There are numerous ways of cracking oil by the application of heat and pressure. Some are commercial while others would break the refiner more quickly than grand opera would break the Commercial Club of Rubensville. The law wisely denies reward to the dreaming inventor who cannot make his dream come true and bestows it upon the practical man of science who can and does deliver something real, something that will work. What do we of this generation care whether some one 60 years ago patented a cracking process if his invention was only partial and failed to embrace the vital elements essential to commercial use? It is of no interest in the twentieth century and of less moment to the courts. The law on this point is so well settled that its statement is not an invasion of the realm of legal discussion.

Real Invention of Late Date

We certainly know that the real invention was not made 60 years ago or else it fell into "innocuous desuetude" and there remained some 50 years. Such inventions once completed do not slumber. Those who have been in the refining business for the last 20 years know that the art of cracking oil had its genesis in this period. Anything back of that was theory void of commercial practice, a thing at which the law smiles in pity. The patent office knows the situation and it would be an interesting picture if we could see what the patent office thinks. It has repeatedly decided the very issue now tendered on patentability and in considering the numerous applications coming before it in recent years has carefully drawn the lines between what is old and what is new. The patent bar of the country has watched every step with critical eye, and many questions have been litigated to a finish. True, patents are not always valid, but it is equally true that they are valid prima facie.

Development of Patents

It is generally known that for a number of years the Standard group of companies enjoyed a monopoly of the cracking process. Patents were issued to Dr. Burton after the dissolution decree of 1911, and these patents were owned by the Standard Oil Co. of Indiana. That company used the process itself and licensed other companies of the Standard group upon agreed terms. The value and importance of this method of producing gasoline, as well as the enormous advantage which it gave the companies employing it, did not escape the notice of our own organization.

Our refining department, under the leadership of Vice President R. C. Holmes, was diligent in research work and omitted no effort to protect the company. The Adams invention was acquired, including applications pending, and it was found that Adams was ahead of Burton in point of time, though Burton's patent was issued first. The Holmes-Manley patents followed, thus rounding out and completing our system as it stood. Then, after a thorough test on a commercial basis, with satisfactory results, we served notice of infringement on the Standard Oil Co. of Indiana. This was in 1920. Ensuing negotiations resulted in an agreement, made in 1921, whereby each company acquired the right to operate under the patents of the other, and to license other refiners, giving them protection under both groups of patents.

System of Licensing

This was the beginning of a system of licensing which enabled refiners generally, large or small, to employ the art of cracking oil. The royalties charged were considered reasonable and licensees not only enjoy the benefit of both groups of patents, but of the apparatus developed by the companies through years of experimentation and study and at enormous cost to ourselves. Later, controversies developed with the Gasoline Products Co., controlling the Cross process, which was covered by patents issued to Dr. Cross, and with the Standard Oil Co. of New Jersey, which controlled what was known as the Ellis patents, all of these pertaining to the production of gasoline by cracking. These controversies, after ripening into law suits, were adjusted so that all licensees were placed in position to receive immunity in their operations and not subject to attacks for infringement from any of the companies mentioned.

No Concealment

The Texas Co. does not regret its part in these arrangements. But for them there would have been no certainty in the mind of the refiner. Everyone using a cracking process would have been subject to suit by the companies which had not licensed him. The companies holding patents would have waged legal war, not only between themselves, but with other refiners. Jones or Smith, holding a license from one company, would have been sued by the other companies and would have operated at his peril. The list of companies now sued by the Government shows that so-called independent refiners were not slow to appreciate the advantages offered and statistics on gasoline yields from crude tell the story of whether this general licensing has borne fruit of the right kind.

There has been no secrecy or concealment of the facts. The LaFollette Committee two years ago had the benefit of full and free disclosure and the same has been true of the Department of Justice from time to time. Licensees do not complain that the royalties are excessive, and neither does the Government. The low price of gasoline that has prevailed throughout the period is an argument that cannot be answered.

Patents Stimulate Progress

It should be borne in mind that every patent is a monopoly. The word is a terrible one, but the statement is true. Patents constitute one kind of monopoly that is lawful. Perhaps it would be better to call it protection. But whatever the name the same rule applies whether the patent is held by a large company or a small one, by a millionaire or a pauper. Our forefathers had the wisdom to include in the Constitution of the United States a section empowering Congress to provide for the issuance of patents on inventions and improvements. The primary purpose of the patent grant is to promote inventions for the perpetual good of all the people by giving the inventor a temporary reward, which he can realize by holding the patent or by selling it. That which the Government grants is a 17-year monopoly in terms. It carries the right to exclude others from using the invention during the life of the patent. The right to exclude implies the right to license with restrictions or upon any terms which the owner of the patent may elect to impose. The public comes into full and free enjoyment of the invention at the expiration of the patent period of 17 years. So, after all, patents are not such a menace, especially when it is remembered that they have served to stimulate invention, and that invention is the outstanding feature of our age and civilization.

Whether the patents are valid and what they include, and whether their validity can be tested in this action, and whether if any one patent in the several groups is valid and covers the process employed it is unlawful to impose restrictions and conditions in connection with licenses which need not have been granted at all—these are some of the questions for the lawyers and the court at the trial, and we are well assured that the defense will be fully developed and ably presented.

TO USE FUEL OIL

The Great Northern Railway Co. announces that its Butte, Mont., division will be equipped with oil-burning locomotives as quickly as the company can contract for an adequate supply of fuel oil and convert the engines into oil burners.

Fill In The Coupon!

Then you will be SURE of getting the Journal every week and the 1924 Semi-Annual Review of the Petroleum Industry—it will be published this month.

Mail the coupon now.

The Oil and Gas Journal

Tulsa, Okla.

You are hereby directed to mail The Oil and Gas Journal to me for_____year. Enclosed find remittance $_____

Classify my interests as checked by me.

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$6 a Year
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PENNSYLVANIA OFFERS FLOOD DRILLING PLANS

BRADFORD, Pa., July 26.—Two 2½-inch sections of a core taken through the entire thickness of the Bradford oil sand, near Custer City, have been pulled from the hole and sent to the United States Geological Survey for tests and a study to determine the oil field's possibilities and better means of oil extraction. A. F. Melcher, of the survey, is on the scene to make preliminary observations.

The discovery of the flooding process is said to have occurred in the Bradford Field by accident. When the casing in a well rotted and permitted it to fill with water it was noticed adjacent holes began to give production. A study showed the water pressure was forcing the oil before it and making recovery possible in a territory which had been believed almost exhausted.

Three schemes of flood-drilling are presented in a bulletin issued by the Pennsylvania Geological Survey. One advocates a circle of eight to ten wells about a single water well; another the putting of water into wells on the four corners of a square of old wells while the third suggests placing water in every other one of a string of wells.

The history of the first flooding detailed in the bulletin said "the first purposeful flooding probably occurred about 30 years ago and was done with the object of increasing production. When three years had elapsed after the water had been let into an old well without any appreciable results the owners sold the property feeling that their efforts had been futile. The purchaser pumped the wells at a small profit for several years; then becoming alarmed by the rapidly increasing production of two old wells and having the common fear of flood, sold out at a fair profit. The new owners for several years reaped a harvest in the operation of the property. Then, fearing disaster, they sold out an increase of 25 per cent above the purchase price. This occurred in 1903. Since then the property has changed hands three times."

NEW HANOVER FIELD

The estimated May production of crude in the Clausthal district of Hanover, embracing the Wietze, Haenigsen-Nienhagen and Peine fields, amounted to about 3,600 tons. To this the new DEA group well at Nienhagen contributed 30 to 40 tons per day. At the present time about 20 wells are being drilled. The Anton Raky (Salzgitter) Deep Drilling Co. has united with a group controlled by a large Berlin bank to do further drilling in the new Hanover Field. Two wells are to be started forthwith and are now erecting derricks; four more are to be begun during 1924.

BRING BACK SAMPLE OF NEW GUINEA OIL

A prospecting party has returned to Sydney, N. S. W., with 50 gallons of oil from a 70-foot bore sunk at Matapu, New Guinea, formerly German territory, but now under the mandate of Australia. Mr. Ross, a member of the party, formerly superintendent drilled for the Anglo-Persian Oil Co., who has had 25 years' experience in American oilfields, says he has never seen anything equalling the possibilities of the area. The expedition engaged a number of natives, and arranged for the erection of a complete drilling plant and a road through the bush to the coast.

Members of the party state that the company selected an area stretching along the northern coast line of the mainland of New Guinea to the Sepik River, including the authenticated seepages, and also the site selected by Doctor Schlenzig, the German geologist, in 1913. Drilling commenced in May, and gas indications of oil soon appeared. The bore was carried to a depth of 70 feet, and the flow continued until 40 gallons daily were obtained. The site is 54 miles from Altape, in Northern New Guinea.

NEW DIRECTORS UNION OIL CO.

Clarence Dillon, of Dillon & Co., James C. Brady and George W. Davison of the Central Union Trust Co. will be added to the directorate of the Union Oil Co. of California. Offering is being made at $132 a share of 233,064 shares of Union Oil, previously owned by Royal Dutch interests, which was bought by Dillon & Co. some weeks ago. The stock is now on an annual dividend basis of $7.20 a share, so that the offering price is slightly less than 5½ per cent. At the premium at which the stock is offered, this operation represents a capital turnover of more than $31,000,000 and is, therefore, one of the largest common stock flotations of recent years.

NEW PRODUCER IN ARGENTINE

According to reports received in London from Buenos Aires, the Anglo-Persian Oil Co. has discovered oil in a well being drilled in the Rivadavia oil fields of the Argentine, oil having been struck at a depth of 618 metres. The production of the new well is not yet known. This development is of interest owing to the fact that the directors of this company some time ago decided to withdraw from Argentine if the wells being drilled in the Chubut oil region failed to give satisfactory results. One of the company's wells, in the neighborhood of that which is now producing oil, had been drilled to a depth of over 850 metres at the close of last year, but without result.

89,953,000 BARRELS OF CRUDE AND REFINED PETROLEUM RECEIVED AT EASTERN PORTS

(Contined From Page 78.)

from Baton Rouge and New Orleans as shipping facilities are believed to be as large there as at Port Arthur or Texas City.

The Big Shippers.

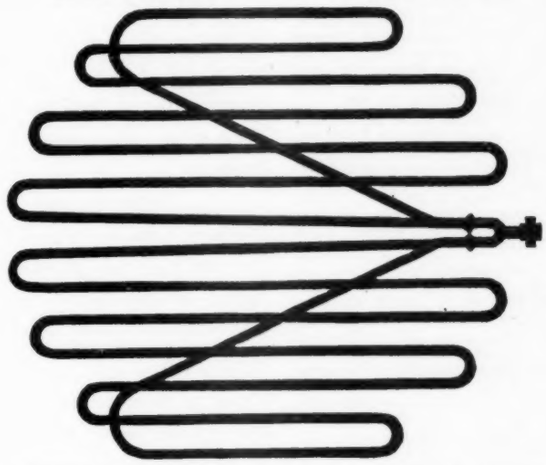
The fleet of the Standard Oil Co. of New Jersey, the largest oil tanker fleet in the world, and the largest fleet flying the American flag, takes the lead in carrying oil to the Atlantic Seaboard. Its ships are credited with 23,149,000 bbls. of the total oil movement to the Atlantic Seaboard during the first half of 1924, or approximately 25 per cent. The following table shows the position of this and other leading shippers:

From—	Gulf Ports	Pacific Ports	Mexican Ports	Trinidad or Peru
Standard of New Jersey	9,687,000	9,559 000	2,797,000	1,106.000
Pan-American Petroleum	2,136,000	345,000	7,807,000	.....
Gulf Refining	7,958,000	.....	141,000	.....
The Texas Co.	4,902,000	.....	975,000	.....
Atlantic Refining	3,772,000	1,232,000	80,000	.....
Atlantic Gulf, W. I.	231,000	3,589,000	891,000	.....
Standard of New York	2,329,000	1,839,000	804,000	.....
Sun Oil Co.	3,366,000	1,420,000	.....	.....

During the period the Standard Oil Co. of New Jersey vessels moved an equal amount to the Atlantic Coast from the Gulf Coast and Pacific Coast. Other leading shippers from the Gulf were Gulf Refining, The Texas Co., Atlantic Refining, Sun Oil, Standard of New York and Pan-American Petroleum & Transport. The largest shippers from the Pacific Coast were Standard of New Jersey, Atlantic Refining, Atlantic Gulf & West Indies, Standard of New York and Sun Oil. Pan-American Petroleum was the largest importer, with Standard of New Jersey second. These figures apply to oil carried in the ships of the companies named. This oil is not always consigned to the companies referred to, however, vessels often being under charter.

PITTSBURGH COILS

"THE STANDARD OF QUALITY"



COILS of every shape, every size, for oil country and refinery use. Electrically welded, continuous—provide greatest assurance against leakage. Send blue print or rough sketch for quotation. Pittsburgh Coils give exceptional service.

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For Measuring Production and Distribution of

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25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—Complete Gasoline Plant, 2 70-H. P. Bessemer gas engines, 1 12x6x 12 Ingersol Rand Compressor, 1 17x12 Ingersol Rand Duplex Pump, high and low and storage tanks, electric light plant. R. W. Russell, St. Marys, W. Va.

FOR SALE—Eight 7,200 gallon tank cars, standard gauge; also five 5,000 gallon tank cars, for trolley car track; sixteen 1 ton Koppel coal charging cars for boiler rooms. Immense stocks of Pipe, Valves and Fittings in all sizes. Wire, phone or write. Tate, Fisher & Rice Co., 258 Washington St., Boston, Mass. Telephone Main 8365.

FOR SALE—Several gas engines and compressors. All makes and sizes. Electric plants, both D. C. and A. C.; four drilling machines. R. W. Russell. St. Marys, W. Va.

FOR SALE—One No. 23 Star Drilling Machine fully equipped with necessary tools. I am offering this machine at a special price for immediate sale. L. H. Brocksmith, 1856 Menard Street, St. Louis, Missouri.

GENERAL GEAR &
MACHINE WORKS
"If It's Done in Metal, We Do It"
Gear cutting, blacksmithing, machining, welding, die making, and metal stamping.
115 South Detroit, Tulsa, Okla.

OPERATORS ATTENTION
If you want to sell your second hand casing or line pipe or if you are in the market to buy, it will pay you to get in touch with us. We are the oldest established dealers in our section of the country and we are reliable.
WESTERN
BROKERAGE & SUPPLY CO.
Eastland, Texas

TANK BOLTS

SAME-DAY SHIPMENT

⅞x3¼-inch, ⅞x3¼-inch, ⅞x1-inch, ⅞x1¼-inch, ½x1-inch.
Write or Wire for Quotations

STEEL MFG. & WAREHOUSE CO.

1447 Genesee St. Kansas City, Mo.

FOR IMMEDIATE SHIPMENT—Second hand line pipe and casing in A-1 condition:
10 miles of 3-inch Standard line pipe.
5 miles of 4-inch Standard line pipe.
5 miles of 6-inch Standard line pipe.
70,000 feet of 6⅝-inch 20- and 24-lb. casing.
60,000 feet of 8¼-inch 28-lb. casing.
20,000 feet of 10-inch 35- and 40-lb. casing.
5,000 feet of 12½-inch 50-lb. casing.
2,000 feet of 15½-inch 70-lb. casing.
JOSEPH DAVIS COMPANY
613 Kennedy Bldg., Tulsa, Okla.

ATTENTION!!!

OIL WELL TOOL MANUFACTURERS

We are offering, subject to prior sale:
Forged and Rough Turned
CHROME-NICKEL STEEL BARS
(S. A. E. 1035)
Sizes: Diameters 6 1/16; 8 1/16; 10 1/16 inches.
Lengths 12 ft. 8¾ in.
This is a high grade steel suitable for reforging or machining various oil well tools.
Heat numbers stamped on each bar. We have sold large quantities of this material for oil field use where it has proved highly satisfactory. Our facilities insure an adequate supply at all times.
We shall appreciate an opportunity to quote you. Let us have your inquiries.

NATIONAL FORGE & TOOL
COMPANY
Irvine (Warren County) Pa.

FOR SALE—EQUIPMENT

FOR SALE—One No. 25 Star Drilling Machine, with a good line of bits and tools, in good shape; half mile from railway; $1,800. Box 248, Wellsville, Kan.

PRACTICALLY NEW—32"x12' Bridgeford Geared Head Engine Lathe, late type, eternal face plate gear drive, single pulley, quick change, compound rest, a wonderful buy at $1,750.00 f. o. b. Bridgeport,
LUCAS & SON, Inc.
Bridgeport, Conn.

FOR SALE—150 feet of 70-pound 15½-inch; 1,000 feet 40-pound 10-inch; 2,700 feet 8¼-inch 32-pound 8-thread and 3,400 feet of new 24-pound 6¼-inch 10-thread J. & L. Woodlawn. Special casing; 100,000 feet of 2-inch line; 20,000 feet of 2-inch tubing and rods; also, excellent powers, engines, tanks, and other equipment. J. F. Arnold Co., Decatur, Ind.

P. & H. TRENCH MACHINE
Cuts 24 inches to 28 inches wide by 7 feet, 6 inches deep; wheel type No. 105; has only cut ¾ mile; gasoline engine drive. Cost $13,000—1923—price $7,100 cars Indianapolis, Ind.
ROSS POWER EQUIPMENT CO.
Indianapolis, Ind.

FOR SALE—One No. 3 Keystone Drilling Machine, with bits and tools; 3 miles Garnett, Kan.; $800. Box 248, Wellsville, Kan.

FOR SALE
No. 2 National drilling machine and tools. First-class condition. Located one-half mile north of Sand Springs. Full equipment for drilling well; fishing tools, extra casing tools. Call or write. Phone 2214.
UNITED DRILLING CO.
Bartlesville, Okla.

COMPLETE Union Tool Rotary drilling rig; twin-cylinder engine; two 45-H. P. boilers; 2,400 feet of 4-inch drill stem; new Hughes rock bit; complete set fishtail bits; mud hog pump. This rig is complete and in good condition. Can be seen at Dixie Oil Co. lease, Cement, Okla.

GRAY IRON CASTINGS
Inquiries for Prices
Appreciated and Promptly
Answered
LAURELTON FOUNDRY CO.
Laurelton, Pa.

25,000 BARREL TANK
STILLS, condensor boxes, boilers; large quantity of various size fittings; all in A-1 condition. Priced at a bargain. Call or write F. A. Sanders, 420 Mayo Bldg., Tulsa, Okla., phone Osage 7037, or 98, Jennings, Okla.

FOR SALE—1200 feet of 4⅞ casing; run once; located at Independence, Kans. Address Geo. D. Spruill, Arkansas City, Kans.

VALVES—Globe Angle, Gate Valves. Standard makes. Large stock, priced very low. Up to six inch. Send for discount sheet. Also pipe fittings. Buffalo House Wrecking Co., Buffalo, New York.

FOR SALE—Heavy string Oil Well Supply Co. standard tools, boiler and engine included. Price f. o. b. $3,000.00. Address W. H. Harvey, Water Valley, Miss.

FOR SALE—80 h. p., 2 cylinder Diesel Oil Engine, in good condition. For further information address The E. L. Essley Machinery Co., 551-557 Washington Blvd., Chicago, Ill.

FOR SALE—Shop worn, but new, never used standard rig. Includes triplex pipe steel (L. C. M.) derrick, rig irons, steam drilling engine with fitting; boiler with stack and trimmings; foundation timbers; drilling and casing tools; cable drilling and sand lines. Also quantity part new and used casing 12½-inch down to 5-inch. Immediate delivery f.o.b. cars, Oklahoma where rig can be inspected. Snap for quick cash buyer. Address Box A-240, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—EQUIPMENT

ONE 72"x18' Boiler, 66-4" flues used 2 years, fine condition, 200 pounds pressure; one 48"x12'; one 54"x14'; one 60"x18' good condition, 100 pounds pressure, one 150 h.p. boiler feed, one 10x12x8 steam pump, one pressure tank, boiler shell new heads 54"x18'; 5-h. p. Electric Motor, direct connected water pump, 40 pounds pressure 180 gallons minute. 10 h. p. Stationery Gasoline Engine. W. H. Underwood, Hutchinson, Kans.

LEASES—PRODUCTION

ALLEN COUNTY, KENTUCKY—Three to 10 barrels settled production; 50-acre lease, wells within 300 feet; low price or drilling proposition. Box 489, Bowling Green, Ky.

MARATHON FOLD AND
TEXAS PANHANDLE
LEASES in Reagan, Crockett, Pecos, Terrell, Glasscock, Sterling, Gray, Carson, Armstrong, Donley, Wheeler, Hemphill and other counties in Marathon Fold and Texas Panhandle. Lowest prices; best locations. Write for free maps and reports. P. R. MacIntosh, 215 Neil P. Anderson Bldg., Fort Worth, Texas.

FOR QUICK PROFIT possibilities investigate this closeup lease offer—Have 100 acres only few hundred feet from wells now producing high gravity oil from 350 foot depth in Kentucky—well will be drilled near center of lease immediately—this acreage worth $100 to $200 today—should bring around $400 to $500 per acre when my well reaches shallow oil—Offer 2 acres or more close to well site for only $60 per acre until August 10—Write or wire Frank Weeks (owner) Virginia, Ill.

ROYALTY STROUD FIELD
Trend of big production running toward tract in which fee owner will sell up to one-half royalty. Half mile from big production. Quarter mile from four drilling wells. Large operating company. Phone Osage 6889. Address Box A-320, care The Oil and Gas Journal, Tulsa, Okla.

OPERATORS ATTENTION
Survey 2,458, south part Archer-Baylor County, surrounded by many drilling tests and producers. Worthy of prompt investigation. Will sell in fee 120 acres at $100 an acre. Address owner, Jno. J. Dillon, P. O. Box 194, Denver, Colo.

OIL ROYALTIES
On the best structures in Routt and Moffat Counties. Looked upon as one of the most important oil fields in the Country. Get in while prices are reasonable. F. W. Thomas & Co., Mount Harris, Colo.

INDIANA PRODUCTION—235 acres on rock road 30 miles north Evansville, 5 settled wells, producing 75 bbls. per day. 15 proven locations, with possibly many more. Complete power plant, tanks, three strings drilling casing. All offered at bargain, settle partnership. No trouble to give detail information with pipe line run to interested parties. H. A. Mann, 314 Parrett St., Evansville, Ind.

TEXAS

CARSON COUNTY—Our well, the Culbertson strikes oil and gas at 1,210 feet; first shallow record for the Panhandle; we are selling limited amount our acreage around this well; get in while prices are low—now $10 to $100; large companies have acreage about us; late contour map and weekly advice of progress free.
TEXAS-OKLAHOMA LEASE CO.
1418 Kirby Bldg., Dallas, Texas

ROYALTIES—Deed to one-half land owners oil and minerals, in the great Cumberland County, Kentucky, Field; close to production, on structure, approved by reliable geologists, $2.50 per acre, up. Frank Richardson, Columbia, Ky.

LEASES—PRODUCTION

WILL GIVE 5,000-ACRE OIL LEASE FREE
to anyone who will drill or finance the drilling on my 10,000-acre oil lease or one-half interest in the entire body. Located in East Tennessee and with every favorable indication of a fine body of oil. Have had considerable experience in locating oil and very successful in making drilling location. Drilling depth from 2,200 to 3,000 feet. Will be pleased to confer with interested parties on above proposition. R. H. Whittle, Knoxville, Tenn.

BUY FROM Land Owner. New leases, 50-cent bonus. Production four adjoining counties. Box 458, Purcell, Okla.

HAVE GOVERNMENT Leases, some patented land; well on structure; 10 to 50 bbl. wells at 500 to 700 feet, 42 to 54 gravity. Also general merchandise store. Come and look it over. A. H. Spencer, Bluff, Utah, or Kayenta, Ariz.

FOR SALE—Shallow leases, proven territory, Allen County, Ky. 400 feet drilling. One lease 125 acres, 5 wells equipped, except power, exceptional bargain, approximately 25 barrels flush, $6,000.00. Cash or terms. Address Box 80, Scottsville, Kentucky.

SOUTHEAST New Mexico has opened new field with 37 gravity oil from 1,950 feet with 47 feet of sand. Intensive drilling campaign just starting. We own leases all parts of Southeast New Mexico. Orcutt-Harris & Co., Inc., 816 Oilcord Bldg., Oklahoma City.

MEDINA COUNTY

$1.50 an acre

We have a very limited supply of Medina County, Texas, leases practically hemmed in by both the Humble and Mid-Kansas people which we are offering for only $1.50 an acre.

We also have many other leases. We have Reagan County 4 miles from Wrightsman's test; Bexar County 4 miles from Raybourn test; and several others close to wells. Here are a few of them:

Reagan County	$3.50 per acre
Pecos County	$1.00 per acre
Crockett County	$2.00 per acre
Crane County	$1.00 per acre
Karnes County	$2.00 per acre
Gillespie County	10c per acre

30 other counties.

Free map of Texas showing Marathon Fold and Balcones Fault given with each inquiry. Write today for our latest list of bargains. Don't buy any leases until you see ours. We sell for less. Get particulars at once. No obligation.
GULF REALTY COMPANY
287 Bedell Bldg. San Antonio, Texas

10c AN ACRE to $25 an acre. Texas Oil Leases. Easy terms. Get particulars. No obligations. Gulf Realty Co., 285 Bedell Bldg., San Antonio, Texas.

McMULLEN and Live Oak Counties, Texas, recognized today by the leading oil men and geologists as the coming big oil field of South Texas. Choice commercial leases. Large and small tracts. Drilling contracts. Acreage in fee with all mineral rights. Bargains; easy terms. Prices advancing rapidly. Bank references furnished. Gulf Leasing Co., 520 Brady Bldg., San Antonio, Texas.

HAVE DECIDED to lease the northeast quarter of the northwest quarter of Section 16-14-11, Okmulgee County, Okla. Small Dutcher sand producer offsetting center of west line. This well should have come in big, had it been drilled with more care, having flowed big and often during past two years. Look this 40 up, then make me best cash offer. Have refused to lease same up to present, rejecting good offers. (3 sands.) Also 480 acres in Section 26-13-25 Sequoyah County, Okla., (a good future prospect.) Address C. P. Repetto, 7207 High Street, Maplewood, Mo.

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

PRODUCING Royalties in Texas bought and sold. J. F. Marion Co., Magnolia Bldg., Dallas, Texas.

OIL ROYALTY—In the new Blackwell Pool. Units in 160 acres, offset to production. Royalty deed from land owner to buyers. Write today for full information to J. R. Sparks, Blackwell, Okla.

MEXICO

We have special facilities for looking after the interests of Oil Companies or individuals whose holdings in Mexico do not justify the maintenance of an office force or manager. Correspondence solicited.

Cia. Bancaria E Industrial de Tampico S. A.
Capital $400,000.00
H. Y. Blake, Manager
P. O. Box 492, Gomez Bldg.
Tampico, Mexico

FOR SALE—2,400 acres promising oil land Richland Parish, Louisiana; not far from famous El Dorado Fields; on good structure; it has most enough timber on it to pay for it and will make best of farm land when cleared. Price only $12.50 acre in fee, terms easy. For particulars write W. T. Pitts, Indianola, Miss.

NEW MEXICO OIL & GAS LEASES

Forty acres for $10. We offer five-year leases in Valencia, McKinley, Sandoval, Torrence, Guadalupe, Quay, De Baca, Rio Arribba, Soccorro and Chaves Counties, from 25 cents to $1 per acre. Perfect titles and low rentals. Write for maps and particulars.

NEW MEXICAN EAGLE OIL CO.
Saupla, Okla.

FOR SALE—At bargain prices, oil and gas leases, production and royalties in the Kentucky shallow fields. For full particulars and maps, address W. P. Harley, Bowling Green, Ky.

FORT COLLINS, COLORADO, OIL LEASES

I have for sale on structure acreage in close proximity to drilling wells of Union Oil Company of California. This acreage is the best available in the field. If you have cash and mean business write, call or wire.

H. O. BRUNSVOLD
Room 5, Ferguson Bldg., Denver, Colo.

THE UNDERSIGNED will offer for sale oil and gas lease of 80 acres of southeast of 7-24 north, range 1 west, Noble County, Oklahoma and half interest of oil and gas royalty. Address Antone J. Sauer, 3601 Pacific Ave., Lassitor, Long Beach, Calif.

FOR SALE—Shallow leases joining the Casey Clark County, Ill. oil field joining production. No dry holes between our leases and production. We take our pay in oil if desired. Also production for sale. Box W-192, Rockville, Indiana.

OIL LEASE—80 acres, near Wagoner, Oklahoma; 3 wells, depth about 600 feet, price for quick sale $4,000. Box 483, Monmouth, Illinois.

YOU DON'T QUESTION whether the Standard, the Ohio or Union Oil companies know their business. The Wall Syndicate controls the largest, highest dome in New Mexico, townships 25 and 26, actually 2,600 feet higher than Amarillo, same monocline; (See monoclinal crosscut from government's report, page 14, July 17th issue of The Oil and Gas Journal.) Standard drilling day and night, SW 15-23-24, Colfax County. Eureka's well with 6 sands excellent showings, proving structure. Offering 40-acre tracts at $10 per acre. Bearing full investment interest in well, lease actually bonus. We are much higher and better located than other drilling wells. Local or district representatives wanted. Wall Syndicate, Box 824, Wichita, Kans., or 429 17th St., Denver, Colo.

LEASES—PRODUCTION

TO LEASE for oil and gas, several hundred acres lying in direct line between Malone No. 1 in Chautauqua County and new well in west edge of Montgomery County, Kansas; both wells in the second break in lime and reported at 400 and 4,000 bbls. respectively. M. C. Sadler, 1053 Faxon Ave., Memphis, Tenn.

FOR SALE—1-16 royalty on 80 acres. 140 for lease 2 miles southeast of Catter Valley Field, Webster Parish. Abstract brought down to date. Address Duffy Dixon, R. F. D. No. 1, Box 88 A, Grove, Louisiana.

FOR LEASE

20 acres proven gulf coast crude. Property adjoins Texas and Galena Signal companies producing property at Humble, Texas. Within 150 to 200 feet of 2 producing wells; has 2 wells on property, will produce 200 to 500 bbls. if properly worked over.

OWNER
327 First National Bank Bldg.
Houston, Texas.

McCLAIN CO. OKLAHOMA

Own four tracts, 160 acres each, center of county. Those posted on drilling progress toward this acreage, from every direction, must know the opportunity is not far off to realize handsomely on a trivial investment. My leases date Sept. 15th, 1923, five years, rental fifty cents per acre. For prompt acceptance, I will sell half at $4.00 per acre; Twn. 6 North, Range 2 and 3 West. Jno. J. Dillon, Box 194. Denver, Colo.

FOR SALE OR TRADE—800 acres Pecos County, Texas not leased. $10.00 an acre. What have you? 701 East 12th St., Oklahoma City, Okla.

HAVE 80 acre lease in Wilson County, Kansas, deep test now drilling ½ mile away; this is just N. E. of the 4,000 bbl. Colmean No. 1 near Independence; rare opportunity. Will sell for $15 an acre or exchange for Tampico Field acreage. Would like to correspond with someone going to Tampico in the near future. W. J. Saunders, 4448 Troost, Ave., Kansas City, Mo.

NEW MEXICO STATE OIL LEASES

Chaves, Union and Roosevelt Counties. For details as to location in said counties. Address C. A. Wicklund, Independence, Ky.

OPERATORS—The stampede is on in Montgomery County, Mississippi, world's next big high gravity oil field. Winona, Miss., mecca for oil men. Balcones Fault leases. W. C. Brooks, Memphis, Tenn.

HELP WANTED

SUPERINTENDENTS, Engineers, executives, now earning $3.000 to $25.000, will find out individual, confidential service a dignified and effective medium to make desired connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not an employment agency. Inquiries solicited only from persons with records of successful performance and stability. Jacob Penn, Inc., 305 Broadway, New York City, N. Y.

SALEMAN WANTED—One to three lease salesmen have wonderful opportunity in the Russel district. Write or see Raber and Gorges, 116½ East Fifth St., Hutchinson, Kans.

POSITION WANTED

STENOGRAPHER, translator, secretary; fluent Spanish, French, Portuguese; native American; single; long residence in Europe and South America; knowledge of geology, index fossils and oil field nomenclature. Address Box A-310, care The Oil and Gas Journal, Tulsa, Okla.

RESPONSIBLE POSITION wanted by civil engineer who has had several years 'oil field experience managing large oil properties. Now employed developing Oklahoma properties, but desires employment in Rocky Mountain States. Excellent references. Address Box A-243, care The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED

CIVIL AND PETROLEUM Engineer, member A. S. C. E. seventeen years general engineering and oil experience. Past 8 years land and lease official for large nationally known company, operating in all Mid-Continent and western fields. Close personal contact with the executive, legal, production, and geological departments has given me a broad and valuable experience which will be exchanged for an official position and reasonable compensation. Address Box A-330, care The Oil and Gas Journal, Tulsa, Oklahoma.

OIL AND GAS man age 38, eighteen years experience, desires position in charge of drilling and production, city plant or field work, nine years with present company, can handle men diplomatically and get results. Unquestionable references. Reasonable salary. Address, R. D., 3865 W. 40th St., Cleveland, Ohio.

PRACTICAL man, a driller for 10 years and 10 years running tools and production superintendent wishes place with reliable company. Address Box A-322 care The Oil and Gas Journal, Tulsa, Okla.

WANTED

WANTED—Party to help develop large acreage in southwest Indiana. F. M. Weister. Box 514, Carnegie, Pa.

WANTED—About 30 acres land in fee with all oil and mineral rights, located on best structures in Oklahoma or Texas, with geologist report on same, also, would take option on 7,000 acres. Give full particulars, price and terms on your offering. Address Box A-311, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—To buy a good Star No. 28 rig. Address J. W., 1240 N. Cheyenne St., Tulsa, Okla.

WE WANT TO BUY ENGINES

Full Diesel and Gasoline Engines 50 HP up to 200 HP. Submit full details including price, age, photo, cylinder and overall dimensions and full information in first letter. Address Box A-331, care The Oil and Gas Journal, Tulsa, Okla.

WISH TO communicate with reputable contractor regarding drilling of test well in Brewster County, Texas. F. Heman, Box 58, Olive, Cal.

WANTED—Producing royalties, Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

WANTED—Three strings of one-run casing in A-1 condition in sizes 12½, 10 and 8-inch, standard weights. Send prices, length and weight. Wellington Oil Company, 604 Central Savings Bank Bldg., Denver, Colorado.

DRILLING WANTED—Submit your drilling proposition to us either contract or acreage propositions, we are open for a good deal. Raber and Gorges, 116½ East Fifth St., Hutchinson, Kans.

WANTED—2,000 to 2,500 feet of 6⅝-inch oil well casing with long collars, 20 to 24 pounds to the foot, located as near as possible to Illinois. Address E. A. Keith, P. O. Box 332, Martinsville, Ill.

WANTED—500 to 2,000 foot drilling for new machine and tools. Will give satisfaction and appreciate any proposition. Address Box A-321, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—Party with drilling outfit to drill a well in Kevin Sunburst proven territory, Montana, for an interest in well and lease. E. Yanish, Shelby, Mont.

FINANCIAL

GEOLOGIST, petroleum engineer thoroughly familiar with Mid-Continent lease and royalty values and in position to guarantee satisfactory profits, offers his services to individual or group wishing to invest in oil properties, either producing or speculative. Address Box A-312, care The Oil and Gas Journal, Tulsa, Okla.

FARM LANDS FOR SALE

560 ACRES—Fine stock and grain farm. Rock road close, to Kansas City. Forced sale. Write for particulars and price. W. O. Snider, Lees Summit, Mo.

BUSINESS OPPORTUNITY

CAPITAL—Eastern and Canadian can be quickly reached through brokers, bank managers and salesmen; valuable information upon request. Amster Leonard, First National Bank Bldg., Chicago, Ill.

FOR SALE—Tank station, doing a nice wholesale business. Home Oil Co., Hugo, Okla.

FOR SALE

Completely equipped machine shop employing 11 men, near shallow oil field, another now opening; a good paying proposition; 17 years in business; only shop in 50 miles radius; reason for selling, owners going into implement manufacturing business. Cameron Machine Shop, Cameron, Texas.

CHANCE OF a lifetime. Have two inventions; pipe machine to screw and lay line pipe; also transmission for getting side power upon truck. Machine catches pipe from side, screws and lays line on one-half usual time. Want party with $5.000.00 put in escrow to build machine, buy Dodge truck, pay patent, incorporate a company; money used for this only. For further information write F. S. Fea, 1161 Pacific Ave., Long Beach, Calif.

PANHANDLE, Carson County, Texas, the coming oil city. Trackage, business and residence lots for sale by owner. Fred Horsbrugh, Amarillo, Texas.

WILL RAISE MONEY on or buy outright partially developed leases in any State. Give full details first letter. Room 618 Pontiac Bldg., St. Louis, Mo.

CORE DRILL your structure with diamond drills and reduce hazard of wildcatting. Let us help your geologist correlate structure before you put cable tools at work. The cost is relatively small and the possible saving enormous. On well located tracts we will accept acreage in lieu of profits from drilling. Drilling Corporation of America, George H. St. Clair, General Manager, 205 Cosden Bldg., Tulsa, Okla. Phone Osage 8183.

MY SCIENTIFIC METHOD eliminates guesswork. Producing areas carefully mapped before drilling. Production estimated. For particulars, write C. L. W., 5534 Hays St., Pittsburgh, Pa.

FOR SALE—One service station complete with bulk station and two trunks in town of five thousand: station located on Red Star Highway and Capitol Route, a money-maker and priced to sell. Address Box A-332 care The Oil and Gas Journal. Tulsa, Okla.

REFINERS

Who wish to acquire chain of Bulk Plants and Filling Stations, through construction or purchase, without any material cost to them communicate with Box A-335, care The Oil and Gas Journal. Tulsa, Okla.

CAPITAL—Advertiser with good financial backing is seeking real proposition worth developing; will invest from $10,000 to $100,000. Address P. O. Box 457 Chicago, Ill.

INCORPORATIONS

DELAWARE incorporator. Charters; fees small; forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

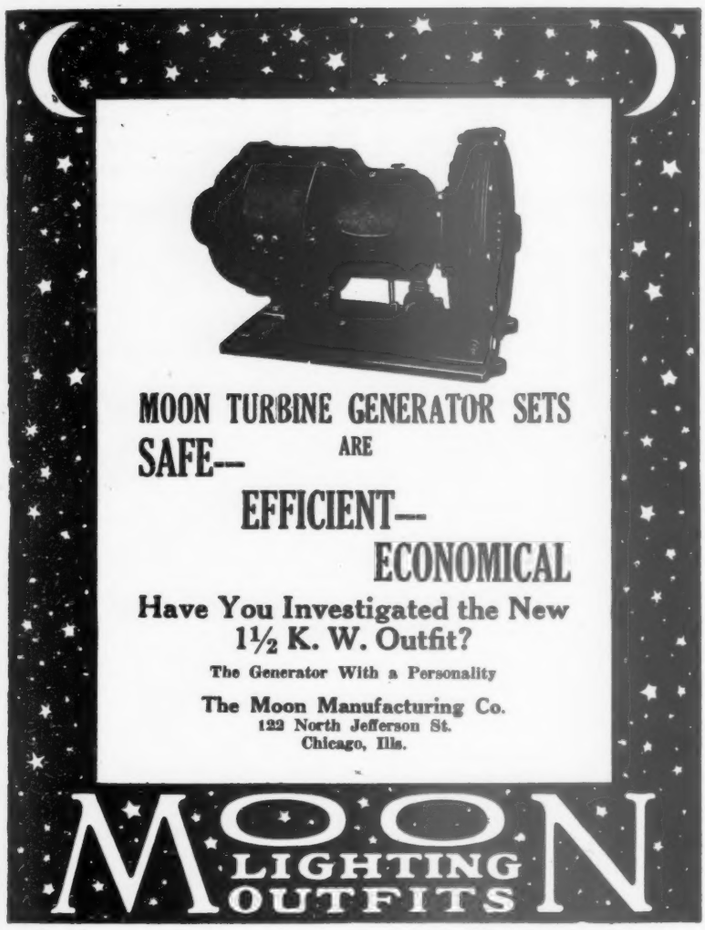
OKLAHOMA Incorporator. Charters and forms, moderate fees. J. M. Nolan, Oklahoma State Capitol Bldg., Box 115, Oklahoma City, Okla.

FOR SALE—PETS

GERMAN POLICE dogs, bought and sold. Kentucky Home Kennels, 2225 N. Lottie, Oklahoma City, Oklahoma, care Capitol P. O.

FOR SALE—Thoroughbred Airedale pups from imported champion stock at reasonable prices. D. M. Glass, Maple Lawn Kennels, R. 6. B. 4, Marshall, Mo.

Additional Classified Ads on Page 155



MOON TURBINE GENERATOR SETS ARE
SAFE— EFFICIENT— ECONOMICAL

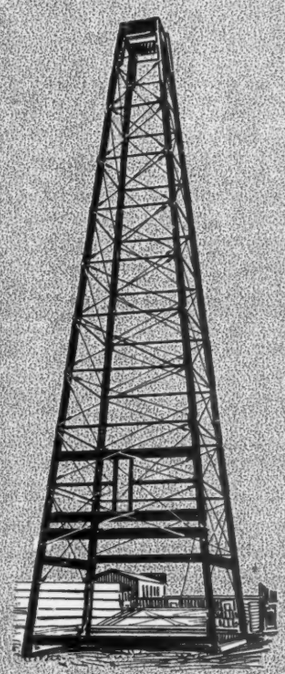
Have You Investigated the New 1½ K. W. Outfit?

The Generator With a Personality

The Moon Manufacturing Co.
122 North Jefferson St.
Chicago, Ills.

MOON LIGHTING OUTFITS

FROM BASE TO TIP—STURDINESS



When you see a National Turnbuckle Derrick — and you see them in every important field—you are struck at once by the excess strength that lies in every detail.

Starting with the firmly secured, dovetailed base legs, continuing to the sturdy, double-locking girths, and up to the very top of the derrick, with its 12"x12" legs—you realize that such an article must be the product not only of good materials and real workmanship, but also of long experience.

May we send you full details?

NATIONAL TURNBUCKLE DERRICK COMPANY
413 Wright Bldg.,
Tulsa, Okla.

Affiliated Companies:
Osage Rig & Reel Ass'n with yards at Burbank, Apperson, Shidler, Wynona, Lyman and Wetumka, Okla.

Mahan, McCarty & Besse, contract rig builders.

NATIONAL TURNBUCKLE DERRICKS

WILDCATTING BRINGS RESULTS IN OKLAHOMA

(Continued from Page 154)

the same period of 1923 shows that while there weer only 850 fewer completions in 1924, the initial production fell off almost half, the difference having amounted to 301,935 bbls. The average initial production per well was therefore only 328 bbls. in contrast to 409 bbls. for the first six months of 1923. This was due to the fact that there were no fields such as Tonkawa developed this year, and nothing comparable to the gushers found early in 1923 around the Bristow district of Creek County. Most of the drilling campaign instituted this year had not yet gone far enough to make an appreciable impression on the reports. The wells in the Cromwell Pool, for instance, did not show up as they should because many were not completed although making much oil. Garfield-Noble counties had only 13,934 bbls. initial production this year, in contrast to its peak of 134,440 bbls. in the same time last year; Creek County had 44,647 bbls. and 242 completions as against 133,946 bbls. and 618 completions in the first six months of 1923; Kay County had 136,599 bbls. and 302 completions this year as against 274,775 bbls. and 256 completions last year; Osage County was about the same, while the Okfuskee-Hughes-Seminole-McIntosh area and Tulsa County provided about the only increases.

There was more initial production in February of this year than in any other month, due to the renewal of activity in the Burbank Field in January. The month of May held the record for the number of completions, however, with 598, the number hoving steadily risen from January. In June, the number declined again to 514.

OKLAHOMA
Summary of Wells Completed During First Six Months of 1924

County—	Comp.	Prod.	Dry	Gas
Washington	11	34	5	2
Nowata-Rogers	28	431	9	5
Osage	615	196,758	90	36
Tulsa	179	24,933	56	21
Okmulgee	261	16,728	102	30
Okfuskee-Hughes-Seminole-McIntosh	222	71,554	65	32
Muskogee-Wagoner	126	2,959	65	14
Creek	242	44,647	69	28
Payne	7	200	5	1
Pawnee	60	5,223	17	5
Garfield-Noble	114	13,934	16	9
Kay	302	138,599	31	14
Carter	226	30,442	32	17
Stephens-Cotton	105	1,474	28	21
Miscellaneous—				
Grant	4	0	3	1
Grady	20	0	14	6
Garvin	16	703	10	1
Marshall	4	0	4	0
Beckham	26	1,181	17	4
Lincoln	11	11,526	3	1
Sequoyah	1	0	1	0
Jefferson	8	15	6	1
McClain	1	0	1	0
Pontotoc	5	225	1	2
Caddo	8	285	2	0
Love	1	0	1	0
Kiowa	1	0	1	0
Tillman	2	0	2	0
Oklahoma	1	0	1	0
Coal	2	0	2	0
Comanche	1	0	1	0
Washita	1	0	1	0
Harmon	1	0	1	0
Roger Mills	2	0	2	0
Pittsburgh	1	0	1	0
Pottawatomie	1	6	1	0
Alfalfa	1	0	1	0
T'l first 6 months	2,619	559,856	666	251
Same months 1923	3,469	861,791	976	362
Difference	850	301,935	310	111

Summary of Wells Completed by Months

Month—	Comp.	Prod.	Dry	Gas
January	236	32,764	62	46
February	389	117,191	90	38
March	419	84,578	111	43
April	463	106,930	99	39
May	598	106,509	178	47
June	514	111,884	126	38
Total	2,619	559,856	666	251
First 6 mos. 1923	3,469	861,791	976	362
First 6 mos. 1922	2,703	604,832	576	202
First 6 mos. 1921	3,520	323,504	894	397
First 6 mos. 1920	4,321	366,121	910	354
First 6 mos. 1919	4,059	215,891	1,124	391
First 6 mos. 1918	4,172	210,409	959	351
First 6 mos. 1917	2,783	155,433	477	188

WOULD CANCEL NAVAL LEASE

Atlee Pomerene, special counsel for the Government, says the Government is preparing suit against the Belridge Oil Co. for cancellation of a 160-acre lease on the east end of Section 34, Elk Hills, Cal., Naval Oil Reserve No. 1, where the company has five wells with an aggregate daily production of 2,000 bbls. Under lease terms the Government receives 35 per cent royalty.

CRUDE OIL PIPE LINES OF THE UNITED STATES

(Continued from Page 28)

the teamsters determined to maintain their highly profitable monopoly, as a man and team could earn from $10 to $25 a day.

In 1864 the Western Transit Co. laid a 5-inch iron line with lead-calked joints. It was to operate by gravity, but the joints leaked badly and the line was abandoned.

First Successful Line

It is generally conceded that the first successful pipe line was built by Samuel Van Syckel of Titusville during the summer of 1865. It connected Pithole City and Miller's farm, 4 miles distant, and was buried two feet under ground, for safety. Van Syckel is generally referred to as the "Father of the Pipe Line."

In 1865, Henry Harley, aided by State police, built and operated the second really successful oil pipe line from Benninghoff Run to Shaffer farm. This and the Van Syckel line quickly demonstrated the superiority of pipe line transportation over wagon and flatboat transportation, with the result that pipe lines were quickly built far in excess of the production of crude oil—and it was several years before many of the companies were able to show a profit.

From 1859 to 1865 practically all of the 14,000,000 bbls. of oil produced was put up in oak barrels of 42 gallons each and hauled from the oil fields to Titusville. A wagon load was 4 to 7 barrels and most of the teamsters were farmers. Flatboats carried the oil from Titusville to Oil City where it was transferred to steamers to Pittsburgh, the first large oil market. The spring freshets on Oil Creek were supplemented with "pond freshets" caused by opening dams at Newtontown, Hydetown and Halliday. The empty oil boats were towed upstream by horses.

The Oil Creek Railroad and the Atlantic & Great Western Railroad hauled oil, first in barrels, then in crude wooden tanks on flat cars—and from this idea of transportation on a railroad car the tank car has evolved.

Evolution in Transportation

And this evolution from wagon and flatboat to pipe line and tank car, and finally to the tank steamer, is probably greater than any evolution that has taken place in the drilling of wells or the refining of crude oil.

"Our "above ground" railroads are familiar sights to everybody, but very few people outside of the producing, transporting and refining ends of the oil business have even a vague idea of the network of "buried" railroads, and the work they do. Few realize that if the steam railroads were to "take over" the work of the pipe lines tomorrow morning it would easily require 2,000,000 tank cars, in addition to what we have today, and 10,000 locomotives.

Our 60 years of pipe line transportation have developed the "engineering" side of pipe line building and operation until it compares very favorably with the best railroad practice. In fact the building and operation of an oil pipe line today closely resembles the building and operation of a railroad.

First comes the "reconnaisance" party of surveyors who make a topographic survey, avoiding hills, rivers and swamps, and staying close to water supplies, railroads and highways; always trying, however to keep the line as nearly straight as possible. Unlike the railroad the pipe line can take the "short cuts." The air line distance from Negley, Ohio to Bayonne, N. J., is 327 miles, the railroad line is 474 miles—the pipe line is 360 miles, or only 33 miles longer than the air line.

After the surveyors come the men who secure, by consent or purchase, "perpetual easements" to the right-of-way for the pipe line, telegraph and telephone lines and sufficient acreage for pumping station sites. In only a few States may right-of-way be secured by condemnation proceedings. These men are fol-

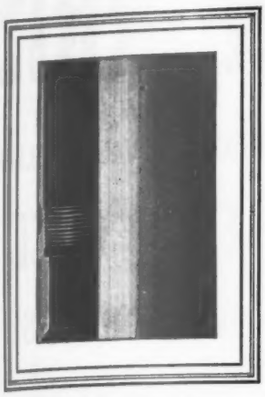
17th St., Denver, Colo.

The Oil and Gas Journal, Tulsa, Okla.

Okla.

Lawn Kennels, R. 6. B. 4, Marshall, Mo.

Additional Classified Ads on Page 155



Texas Pattern Shoe.

Larkin

Shoes
Packers
Die Nipples
Swabs
Clamps
Oil Savers

QUALITY - First
Prices Reasonable

Sold By Leading Supply Companies

LARKIN
Packer Co.

St. Louis, Mo. Tulsa, Okla.

lowed by the "right-of-way" gang who clear the way of trees, build bridges and when necessary, roads for hauling pipe. The right-of-way men are followed by the "pipe laying" gang who string the pipe along the right-of-way, usually from trucks. In the old days a gang was made up of stabbers, tongsmen, ropemen, barmen, jackmen, etc.—about 40 men to the gang—and under average conditions of surface and weather would lay from 2,500 to 4,000 feet of pipe a day. In the early days the pipe line trench was dug by pick and shovel—today the trench digging machine does the work in a fraction of the time. Machines to screw joints of pipe together have largely replaced the old gangs of stabbers and tongsmen—and today these machines are being replaced with machines that weld the joints.

The Modern Pipe Line

The usual trunk line is 8-inch, soft steel, carefully threaded, and tested to an internal pressure of 2,000 pounds to the square inch. Today practically all pipe is buried from 18 to 36 inches deep. If the soil is alkaline the pipe is coated with tar and wrapped in specially prepared paper. In the Rocky Mountain area it is wrapped in asbestos and buried below the frost line. Electric railways running close to pipe lines formerly caused much trouble through electrolysis of the pipe, but this was quickly overcome by coating the pipe with a "non-conductor" and insulating the ends of the line.

While the pipe lines are being laid the pumping stations are being built, the vital parts of which are the oil pumps and the engines that furnish them power. The second pipe line, 2 inches in diameter and 4 miles long, had two pumping stations, with little pumps and steam engines that put about 800 bbls. a day through the line. Today a heavy duty, triple expansion, condensing steam pumping engine under 900 pounds working pressure, will handle 51,000 bbls. in 24 hours.

Under average conditions of pressure, temperature and viscosity the oil in the pipe line will move at about 2½ to 3 miles an hour. Tonkawa crude is high gravity and flows freely, while oil from the "heavy" fields of Mexico, even under a blazing summer sun, is so heavy that "heating stations" have been installed along the line to make the oil fluid enough to move. In the Sinclair line from Salt Creek to Freeman, Mo., a distance of 717 miles, there are 17 pumping stations and 16 "heating" stations, the pumping stations and heating stations alternating throughout the length of the line. This plan will undoubtedly be followed in the proposed line from the new Craig, Colo. Field to the refinery at Parco, Wyo.

Problems of Sediment

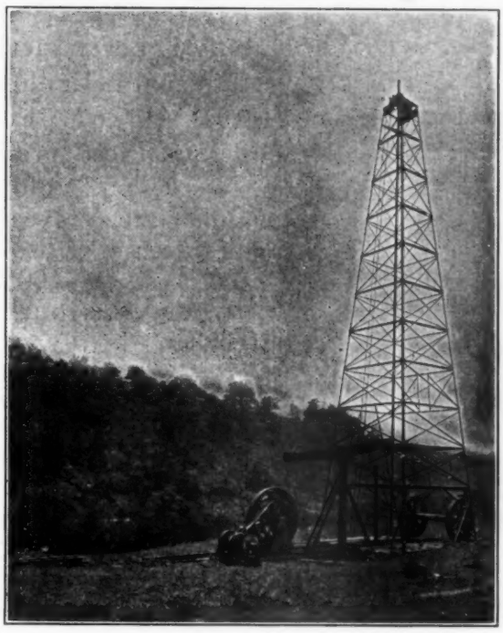
One problem, and usually two, confront practically every pipe line company practically all of the time: Always sediment, and usually paraffin. When the first pipe lines began to "choke up," resulting in high engine pressure and lower throughputs, chemists introduced various liquid agents—others sent a can open at one end through the line—others tried a ball—but J. G. Benton and B. F. Warren found the practical solution in the "go devil" which, with slight modifications, is in use today.

There have been many evolutions in the pipe line and pumping station. Drake's little wooden tanks have grown to 55,000, 80,000, 150,000 steel tanks with double butt strap seams—from open top to gas tight top, welded roof, relief valves and pressure lines—and to floating roofs and water seal roofs. The handling of evaporation from tanks is today considered a matter of prime importance in the economic storing of crude oil.

The pipe has evolved from 2-inch, butt end, iron to 10-, 12-, and 14-inch screw end, and now welded end, soft steel, safe at 2,000 pounds pressure—and from plain pipe laid on the ground to painted, tarred, paper wrapped, asbestos wrapped, and buried below the frost line.

The pumping station is an evolution of the highest type of engineering expe-

O'Brien Structural Steel Derricks



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No upkeep, when put up they stay.

The double splice joint, a patented feature.

Cannot wind or twist.

Has never been pulled in.

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The sturdy old oak derrick got its strength from the fact that it was an angle derrick. O'Brien derricks are **steel** angles. You know the answer.

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PARKERSBURG MACHINE CO.
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Parmaco Vacuum Pumps

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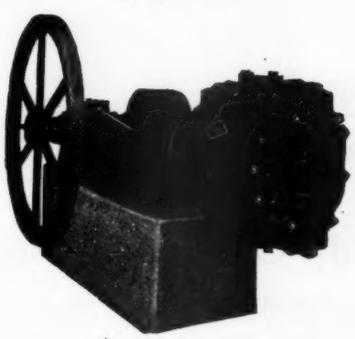

We are overstocked on Parmaco High Speed Vacuum Pump Cylinder Outfits which will be disposed of at greatly reduced prices.

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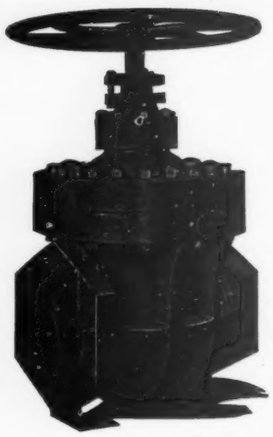

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—hour after hour, day after day,—requiring little or no attention, giving a steady consistent flow of the heaviest crudes, asphalt, tar and all viscous and bituminous products. When you find this condition, it is more than an even chance that it is a KINNEY PUMP.

Thousands of KINNEY PUMPS are telling the same story of consistent efficiency in refineries that dot the map of the United States and foreign fields. Low cost operation, low cost maintenance, trouble-proof service under all conditions,—these are the reasons why so many plants are depending upon KINNEY PUMPS—and why it would be profitable for you to investigate this pump in both its types—steam jacketed and plain.

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rience and almost perfect functioning of the pipe line systems of the United States today is a tribute to the men who developed the idea of the pipe line. It is not an industry—it's a service.

The Start in the East

The area east of the Mississippi River had produced, in round numbers, 1,000,000,000 bbls. of oil before the oil business really got started in either the Mid-Continent, Gulf Coast, Rocky Mountain area or California. Hence the pipe line and the refinery had been established institutions in the East 20 years before the rest of the United States became a factor in either the production or the refining of crude oil.

In 1900 Kansas produced 75,000 bbls. of oil, Oklahoma 6,000 bbls. and Texas 836,000 (with 1,450 bbls. in 1896)—the Mid-Continent was getting ready for pipe lines and refineries.

The erection, in 1897, by the Standard Oil Co., of a refinery at Neodesha, Kans., was followed in 1903 by the building of the first pipe line in the Mid-Continent. Production grew faster than tank storage, with the result that pipe line building increased rapidly—the Standard Oil building an 8-inch line from the Kansas fields to its Sugar Creek refinery near Kansas City, Mo. The next year the line was extended from Sugar Creek to Griffith, Ind., and the Mid-Continent got its first pipe line connection to the Atlantic Seaboard.

The "Lucas Gusher" and the Spindletop boom ushered in the year 1901, and the building of pipe lines became an immediate and pressing necessity. The Texas Co. was born at Spindletop, and from a little wooden shack on a muddy street, in a little town that throbbed with its first smell of oil, has slowly and consistently grown one of the largest and solidest oil companies in the southern Mid-Continent.

Louisiana Development

The Louisiana oil development came in 1905-06, and the Standard of Louisiana, built an 8-inch line from Caddo Field to Baton Rouge. This gave the Standard two others from the Mid-Continent: A northeast outlet by way of Whiting to the Atlantic Seaboard—and a southeast outlet by way of Baton Rouge, and tank steamers, to the markets of the world. Glenn Pool in 1907-08 resulted in The Texas Co. and the Gulf Company each building lines from the Gulf Coast to Glenn Pool.

The Kansas Oil & Gas Co. was organized December 17, 1900, and bought for $300,000, the producing wells of the Forest Oil Co. On January 7, 1901, the name was changed from Kansas Oil & Gas Co. to Prairie Oil & Gas Co. The year 1901 saw the real beginning of oil in Texas and Oklahoma and the birth of the Prairie Oil & Gas Co. and The Texas Co., both destined to become potent factors in the oil development of the Mid-Continent.

In 1902 The Texas Co. laid its original 6-inch pipe line from Spindletop to Port Arthur, 20 miles distant, and April 30, 1913, its pipe line investment was placed at $718,000. From 1907 to 1911 it built a 470-mile 8-inch line from the Humble Pool on the Gulf Coast to Glenn Pool—a 160-mile lateral from the main line to the new Electra Pool in Wichita County—and a 156-mile 8-inch line from Beaumont to the Louisiana-Texas State line to connect with the new Caddo Field.

Other Pipe Line Systems

The J. M. Guffey Petroleum Co. operated in Spindletop with pipe lines connecting with wells at Sour Lake, Batson, and Saratoga to Port Arthur. Guffey's properties were valued at $2,300,000, but were transferred to the Gulf Oil Corp. in 1907 for $1,200,000.

The Oklahoma-Louisiana Pipe Line Co. was owned by the Oklahoma Pipe Line Co., the Prairie Oil & Gas Co. and the Standard of Louisiana. The three lines are operated as a unit and extend from northern Oklahoma to Baton Rouge. In 1911 the investment amounted to $5,484,000.

From the foregoing five pipe line systems, one leading northeast and four leading southeast, have grown the vast

NORRIS

Clutch Type
STANDING VALVE PULLER

Use It ONCE and Its Cost Is Repaid

A Profitable Necessity in Pumping Wells

Every so often the standing valves of your pumping wells must be pulled—to change cups, replace balls and seats and for other reasons. Each time that this occurs in a well not equipped with a Standing Valve Puller two runs of the rods, both in and out of the hole, are required. This is expensive not only because of the labor required but because of the production lost.

The Norris Clutch-Type Standing Valve Puller is not a costly device; yet because it saves that extra run of the rods it is fast becoming a necessity in pumping wells.

A few extra turns of the rods causes the upper part of the Norris Clutch arrangement to come into engagement with the lower part—after which the Standing Valve comes up with the rest of the equipment. That is all the operation requires.

Pull your standing valves only four times in a year and this investment pays 400% returns. Is that worth looking into? If so, ask us for further details.

Manufactured by

NORRIS BROS., Inc.

Manufacturers of Oil Well Pumping Equipment

Robinson, Ill.

133

network of lines that serves the greatest oil producing area in the world.

The masterful position of the big pipe line companies, whether improperly used or not, resulted in the decision of the United States Supreme Court, June 22, 1914, which made all interstate pipe lines common carriers, and January 14, 1915, the Prairie Pipe Line Co. was "split away" from the Prairie Oil & Gas Co.

Referring to Table 1, which shows some of the pipe line companies for the year 1923, you will note that the 35 companies listed had a total of over 64,000 miles of line. This list shows most of the major pipe line, but is not complete, as it does not include many of the shorter independent lines east of the Mississippi and the Mid-Continent, only a few of the Rocky Mountain area and none in California.

The 35 companies listed represented a total investment in pipe lines of over $432,000,000. Of the "other investments," totaling over $305,000,000, the Magnolia accounts for over $219,000,000 with $30,000,000 invested in 2,850 miles of line. It is very apparent that the Magnolia did not follow the same method of classification of "other investments" that was followed by the other companies.

Adding the two total investments together, and omitting the $219,000,000 of the Magnolia's "other investments" which obviously should not be included, gives a grand total of $518,500,000 for 64,750 miles of pipe line, or an average investment of exactly $8,000 per mile of line in operation.

The net income was $62,000,000 on 64,000 miles of line, or about $1,000 per mile, on an investment of $8,000 per mile, or an average earning power of about 12 per cent.

Obviously, after a pipe line is built, the determining factor in the line's earning power is the volume of oil handled—and it is also obvious that short lines within, say, the Mid-Continent, have not the "throughput" of a big company with numerous minor trunk lines and innumerable gathering lines tapping a score or more of prolific fields.

The contrast between investments in the oil fields of the East and the newer fields of the Mid-Continent together with the effect of varying outputs of crude from different producing areas, along with some other factors that affect earning power, are emphasized by reducing the figures for several representative companies shown in Table 1, to the basis of "investment per mile of line" and "net income per mile of line," using the figures that the Government compiled from the companies' records. In Table 2, the companies are grouped according to three crude movements: Mid-Continent to Gulf, Mid-Continent to East and in the East.

TABLE 2.—Investment Per Mile and Net Income Per Mile, for Selected Companies for the Year 1923.

	Total Mileage	Investment Total	Investment Per Mile	Net Income Total	Net Income Per Mile
Mid-Continent to Gulf:					
Gulf	3,242	$36,100,000	$11,100	$2,631,000	$ 810
Humble	1,579	20,180,000	12,800	5,003,000	3,160
Magnolia	2,850	29,983,000	10,500	8,110,000	2,850
Oklahoma	1,235	13,655,000	11,000	2,831,000	2,290
Texas	2,614	46,121,000	17,600	3,795,000	1,450
Mid-Continent to East:					
Prairie	10,772	86,478,000	8,000	15,818,000	1,470
Sinclair	5,732	71,952,000	12,500	2,404,000	420
Ozark	823	11,771,000	14,300	2,831,000	3,440
East:					
Buckeye	6,455	21,775,000	3,300	1,078,000	160
National Transit	3,942	16,537,000	4,200	2,073,000	520
New York Transit	1,534	8,523,000	5,500	296,000	190
Tide Water	2,111	11,097,000	5,200	1,442,000	680

Cost and Return

The average investment of representative companies for the Mid-Continent-to-Gulf lines is about $12,600 per mile and the net income is about $2,100 per mile while the average investment for Eastern lines is about $11,600 per mile and the net income about $1,780 per mile.

The bulk of the pipe lines of the East were built before any lines were built in the Mid-Continent, and at a time when the cost of materials and labor were low as compared with the cost of most of the Mid-Continent lines.

In 1905 the Eastern fields produced 52,000,000 bbls. of oil, while the Mid-Continent produced 49,000,000. In 1923 the Eastern fields produced 40,000,000 bbls., while the Mid-Continent produced 375,000,000. And this ebb and flow of crude oil in the different producing areas is a powerful factor in the profitable operation of pipe lines.

As shown by the key to the pipe line map, only four Mid-Continent trunk lines cross the Mississippi River: the Prairie's north line crosses at Ft. Madison, Iowa; its south line at Wood River, Ill.; the Sinclair line at Ft. Madison; and the Ozark (Roxana) at Wood River. The Ozark line stops at the Roxana's refinery at Wood River. The Prairie's south line supplies the Standard refinery at Wood River and connects with other Standard pipe lines through the southeastern Illinois, Indiana, northwestern Ohio and western Pennsylvania fields to the great Standard refineries on the Atlantic Seaboard. The Prairie's north line supplies the giant Standard refinery at Whiting, Ind., the refinery at Toledo, Ohio, with a branch to the Imperial (Standard) refinery at Sarnia, Ontario, and to other refineries along the way to the Atlantic Seaboard.

Lines From Mid-Continent

The Sinclair line from the Mid-Continent supplies the Sinclair refineries at Kansas City, Kans., and East Chicago, Ind. At Griffith, Ind., it connects with an unbroken chain of Standard pipe lines

Are the outstanding qualities of WHEELING PIPE—and very necessary in the field, on the line, at the refinery, and in fact wherever dependable pipe is used. Specify WHEELING PIPE for Rotary Pipe, Drive Pipe, Drill Pipe, Line Pipe, Standard Pipe, Tubing and Casing.

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Willis Hill—Osage 2289.
Fred Harris—Osage 441.
C. C. Eshleman—Osage 3065.
BARTLESVILLE—Robt. Camblin, 21.
DRUMRIGHT—Chas. Thiret, 424.
CLEVELAND—Gary Young, 154.
OKMULGEE—George Elba, 654.
DUNCAN—Lee Vandell, 217.
THREE SANDS—W. F. Knode, 828-F23.
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BRECKENRIDGE — Roy Richardson, 127.
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LIGHTNING OIL FIELD SUPPLIES
PUMPING POWERS, JACKS, STUFFING BOXES, ETC.

More Power—Less Vibration

Instant Service

Insist on Lightning Pumping Powers They Are Correct in Design

Husky Enough to Do the Job Right

The reliable eccentric motion does away with jerky lines.
Built in three sizes:
No. 4—Belt Drive, weight 6,500 lbs. For deep wells.
No. 2—12 H. P. engine. weight 4,600 lbs.
No. 1—6 or 8 H. P. engine, weight 3,200 lbs.
Turntable gear is easily removable and having a broad face, coarse teeth and large diameter will stand up to the heaviest loads.
Shackle lines set low to the ground (13 in.) eliminate excessive strain.
Quickly installed.

Oil Field Supply Dept.

KANSAS CITY HAY PRESS COMPANY
Kansas City, Mo.

that ends at the great Standard refineries on the Atlantic Seaboard.

Nominally, three pipe lines carry Mid-Continent crude oil northeast to the Atlantic Seaboard—practically one group of interests carries the oil, as the Standard owns a 50 per cent interest in the Sinclair lines.

The first oil through the Sinclair lines from Salt Creek reached the "Mid-Continent-East Chicago" main line at Freeman, Mo., April 12, 1924, and this is the first Rocky Mountain oil to leave that area by pipe line. The capacity of the line is 40,000 bbls. a day, and about 28,000 bbls. a day is being run at the present time. It took 500,000 bbls. of oil to fill the 717 miles of line—and this oil represents about $800,000 of "frozen" flowing capital.

In the Rocky Mountain area there are today 31 oil pipe lines with an aggregate of 861 miles, not including the Sinclair line that is 717 miles long. There are 12 gas lines 414 miles long and 4 gasoline lines with a total of 139 miles. This area has a present crude oil storage capacity of about 40,000,000 bbls. of about one year's production of crude oil.

Lines in California

The pipe lines of California fall into the same two groups as the crude oil production: San Joaquin Valley and Los Angeles Basin. The refining capacity of the San Francisco Bay area is more than three times that of the San Joaquin Valley (about 200,000 bbls. and 60,000 bbls.) and is reflected by the fact that three great pipe line systems carry San Joaquin Valley oil direct to the big refineries on San Francisco Bay while one line branches off to the coast at Monterey where the tankers are loaded. One trunk pipe line leads south from the San Joaquin Valley to Los Angeles, while the Los Angeles Basin pipe lines, like tributaries to a great river bring the oil down to the sea.

The 1923 production for the United States showed an increase of about 180,000,000 bbls. over 1922. California, Texas and Oklahoma furnished almost all of the increase. There was much new pipe line laid in the Los Angeles Basin. A great deal of loop line and some new lines were laid in Texas, with a smaller amount in Oklahoma. Summaries of the cost of these new lines are not yet available, but it has been estimated that the pipe line and related investments totaled probably $50,000,000 for the year.

History repeats itself—and our pipe lines have been "also investigated" by several government agencies, with two outstanding facts established: (1) The "cost of transportation," to the carrying company, is very much lower than the "tariff rate" for carrying the other man's oil; (2) the pipe line tariff rate is very substantially lower than the railroad rate for carrying oil in tank cars. But, measured in terms of service that the pipe line renders to the producing and the refining industry of the oil business, it has earned a place for itself that no other present agency can fill.

WOOD PRESERVATION RESEARCH

E. R. Weidlein, director of Mellon Institute of Industrial Research of the University of Pittsburgh, has announced the founding of an industrial fellowship on the treatment of timber. This research, which is being sustained by the Grasselli Chemical Co. of Cleveland, Ohio, and is being conducted by Dr. A. M. Howald, has for its purpose a study toward improvement of the methods of applying zinc chloride in the wood preservation industry.

Investigational work which was begun during 1923 will be continued throughout the present year. An experimental wood impregnating plant is maintained for practical tests of processes. Research is at present being done under the supervision of Dr. Howald on the development of a method of increasing the permanence of zinc chloride treatments of timber by the addition of petroleum oils.

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Guaranteed to Pump Sandy Wells Longer Than Any Other Barrel.

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Sinclair Gets Lease In Venezuela Held By Royal Dutch Co.

Mason Day and Dr. Veatch, representing the Sinclair Exploration Co., are reported to have leased for 25 years the central area of Buchivacoa, in the State of Falcon, Venezuela, from the British Controlled Oilfields, Ltd. Mr. Day is quoted as saying: "The transaction does not involve a big immediate payment. The area is more important than that of the Standard Oil Co. of New Jersey, adjoining on the east, which cost $5,000,000. Staff engineers are leaving New York immediately for Venezuela."

The lease by Sinclair follows the expiration of the option of Caribbean Petroleum Co., the Venezulean subsidiary of the Royal Dutch-Shell group. The option expired on February 2, last, and no extension was granted.

The Buchivacoa concession of British Controlled Oilfields, Ltd., comprises an area of 3,000 square miles, in the extreme northwest of the state of Falcon, northern Venezuela. The grant was secured from the Venezuelan Government and runs for 50 years from July 22, 1907.

In April, 1922. Standard Oil Co. of New Jersey acquired sole rights to develop the eastern division of the concession, the contract providing for formation of a company by Standard Oil capitalized at $5,000,000, and in the event of additional capital being issued the British Controlled Oilfields to have the right of 50 per cent subscription. The property is to be developed continuously for a period of not less than 10 years, the British company to receive a royalty of one-eighth, payable in either cash or oil.

British Controlled Oilfields, Ltd., is itself developing the western portion of the concession. According to contract with the Caribbean Petroleum Co., it is delivering 12,000 tons (about 84,000 bbls.) of oil monthly from El Mene Field to the port of Altagracia, on Lake Maracaibo, by pipe line built by Royal Dutch-Shell interests. Another 6-inch pipe line will be completed by the end of this year. Shipments began December 25, 1923, and up to March 26 totaled 29,748 tons (approximately 210,000 bbls.).

The action of the Sinclair Co. is in line with the general policy of the large American companies to acquire future sources of oil supplies in South America, particularly in the Maracaibo basin of Venezuela. Oil experts are of the opinion that this area will be the next to be developed on a large scale and emphasize the advantages it possesses in a large potential production of good quality oil and the nearness of the fields to distributing markets. Some of the large companies interested in the Maracaibo Basin area include Anglo-Persian Oil Co., Atlantic Refining Co., Royal Dutch-Shell interests, British Controlled Oilfields, Ltd., British Equatorial Co., The Texas Co., Gulf Oil, Lago Petroleum Co., Maracaibo Oil Explorations Co., Pure Oil Co., Standard Oil Co. of New Jersey, Union Oil Co. of California, Venezuelean Oil Concessions, Ltd., and the Sun Co.

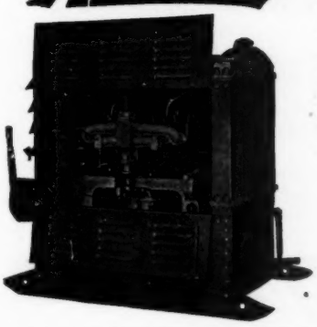
FOREIGN INTEREST GROWING

The interest that the International Petroleum Exposition and Congress has aroused in foreign fields is being exemplified daily in letters and inquiries that pour into the exposition office in Tulsa. The most recent communication is a letter from the Compagnia Nazionale Prodotti Petrolia of Geno, Italy, inquiring about space reservation "for ourselves and our friends." In the same mail came a letter from the Secretary of Industry, Commerce and Labor of the Mexican government, in which he stated that he had just sent invitations to all leading Mexican oil producing companies to attend the exposition. Two German manufacturers of oil field equipment which is used extensively on

EQUIPPED WITH RICARDO CYLINDER HEAD

Right: The Power Take-Off.
Below: The Industrial Unit.

Waukesha
TRADE MARK



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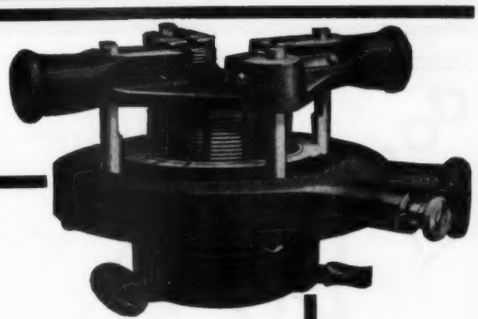

This "Toledo" No. 1A ratchet tool for threading 1" to 2" pipe, gets to the job anywhere, and does its work easily and quickly. For 20 years it has been preferred by experienced operators.

Note its clean-cut appearance, its freedom from complicated parts, and its sturdy construction, yet it weighs less than 18 lbs as it is picked up and put on the pipe. The working parts are few and the ratchet mechanism is in a dirt-proof case. The dies cut with customary "Toledo" ease, and it is the easiest to operate of all 1" to 2" threaders.

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Tulsa Representative: A. F. Campbell, P. O. Box 171

the Continent have written to reserve space among the exhibits. Invitations were issued this week to the Washington representatives of 15 oil producing nations to represent their countries in official capacity at the exposition. The list included the ambassadors or ministers of Argentina, China, France, Germany, Great Britain, Italy, Japan, Mexico, The Netherland, Persia, Peru, Poland, Rumania, Egypt and Venezuela.

Exports Increased During Six Months; No Sign of Decline

By N. O. Fanning

NEW YORK, July 26.—Export prices on the Atlantic Seaboard have been generally strong and the export movement heavy during the past six months. Prices, like domestic, have been higher than during the latter part of 1923, but have shown better staying powers. There has not been any reduction in the export market this year with the exception of a fractional decline due to the lower cost of cases. At the same time prices were established at a level which not only brought a fair return to exporters but was low enough to encourage purchasing abroad.

The manner in which the oil export market has grown is the more remarkable after the good year which the trade enjoyed in 1923. It was expected in some quarters that there would be a slump this year, with a resumption of export buying in 1925, based on the belief that stocks on hand abroad were unduly large at the beginning of 1924. Instead, export buying has kept on increasing with no sign of a letup as yet. This increase in buying is attributed more to the fact that prices have been equitable, than to anything else, although it also reflects recovery abroad.

Prices generally do not affect domestic consumption, because the cost of oil products here is relatively small compared with the cost in foreign countries, into most of which all oil has to be imported. Gasoline costing 25 cents per gallon retail at New York would cost more than 45 cents in London, and more than 60 cents in France. In South America, Africa and the Far East the cost is still higher, due to high transportation and the necessity of selling in cases.

Although bulk shipments have been large from Atlantic Seaboard ports, exports of case goods furnished the feature of the export market during the first six months of 1924. Most of the cased gasoline and kerosene has been exported to South America, Africa or the Far East. The gain in cash shipments reflects growing industrial activity in the sections referred to. There was a slump in 1920 and 1921, but since the latter year business conditions, political conditions and the foreign exchanges have in most cases gradually improved. This improvement is now being reflected in a record demand for oil products, particularly gasoline, kerosene and lubricating oils.

Toward the end of the first six months of this year, a marked gain in case shipments to Australia took place. This is particularly interesting in view of the fact that the Anglo-Persian Oil Co., which is controlled by the British Government, has made repeated efforts to capture the Australian markets, even going so far as to enter into an agreement with the Australian Government and setting up a refinery in that country. Judging from the increased exports to that country from the United States, competition from the Anglo-Persian Oil Co. or other foreign companies has not hurt American trade in any degree whatever.

Inter-American Competition

Competition in supplying the export trade between the Atlantic Seaboard, Gulf Coast and Pacific Coast refineries has shown a decrease this year. At present the bulk export trade is being handled largely from the Pacific and Gulf Coasts, while the trade in cased oil and barrel shipments has been left more to the Atlantic Seaboard refineries. The latter have their own case, can and barrel fac-

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tories, and they are in the best position to get materials necessary to make these containers. The decline in the production of oil on the Pacific Coast has tended to restrict shipments of oil from that center to Europe, which trade has reverted to the Gulf Coast, largely.

Improvement Abroad

As already mentioned, there has been a great improvement in conditions in most foreign countries. In Europe the change is more apparent. Political unsettlement has subsided in a great degree. The Franco-German relations are much less antagonistic than a year ago. The Dawes conference is credited with having been the greatest single factor in that improvement. But there is doubtless a greater disposition than ever on the part of Europe to get away from the old order and to enter more willingly into the new era of peace.

This improvement in political relations is bound up with the business situation to such an extent that improvement in one means improvement in another. There has been an upturn in most European exchanges, and further improvement is expected during the latter part of 1924.

Europe is behind America in the use of oil, but is catching up gradually. Germany is coming into the American market for oil on a scale reminiscent of prewar days. England, France, Spain, Italy, Holland, Belgium and Scandinavia are increasing their imports of oil steadily. The exportation of low-priced automobiles from the United States to all foreign countries is increasing, which means bigger consumption of refined oil.

Dutch-Shell Activities

The Royal Dutch-Shell combine is making a larger bid for the oil markets of Europe and the Far East than ever before. Only the tremendous gain in consumption had made it possible for American companies to increase their trade in the face of this competition. The Shell Marketing Co., for instance, now markets more oil in Great Britain than the leading Standard Oil marketer there, according to recent figures. The Shell Marketing Co. is a Dutch-Shell subsidiary. A considerable portion of its oil comes from the United States.

The Dutch-Shell combine had a record production of crude petroleum in 1923, and results so far in 1924 indicate a further gain this year. But the combine is restricted in refining capacity and not until it remedies this difficulty will it become a really dangerous competitor to American companies. The bulk of its refining is in the United States, but the products of these plants are marketed largely in the United States.

New Era in Prospect

A letdown in export trade might be looked for during the last half of 1924 were it not for the prospect of further improvement in the political and business situation throughout the world. This could not fail to bring about a new high record in foreign oil consumption.

The attempts to curb production of oil in the United States have a deep significance in connection with the export trade. Lower output and higher prices in the United States would probably restrict consumption abroad in the long run.

INDIAHOMA REORGANIZATION

BALTIMORE, July 26.—A plan and agreement has been formulated by the adjustment committee representing the bondholders of Indiahoma Refining Co. for the acquisition of the assets of that company, which have been in receivership since November, 1923. The plan provides for the organization of a new corporation to acquire and conserve, pending development of permanent reorganization plans or a favorable opportunity to liquidate the assets. It is proposed that the assets of the company shall be purchased from the trustee in bankruptcy at the lowest price approved by the court. The new company will be called the Indiahoma Corp.

ROYAL DUTCH EXPLORING

A prospecting expedition to the Island of Celebes has been sent out by the Bataafsche Petroleum Co. (one of the operating subsidiaries of the Royal Dutch-Shell combine) at Balik Papan, South Borneo, according to report by Commercial Attache Cross from The Hague. The Island of Celebes lies east of Borneo.

BUYS COTTON VALLEY LEASE

The Alabama Petroleum Co. has purchased a 40-acre lease in the Cotton Valley district for $24,000, $10,000 in cash and the balance to be paid out of production. The lease is the southeast quarter of the southwest quarter of Section 21-21-10.

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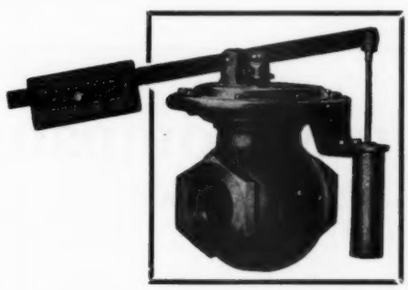

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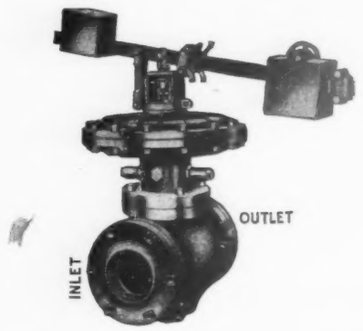

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Mexican Shipments Drop 1,000,000 Bbls. As Compared to May

TAMPICO, Mexico, July 26.—A decline of a little less than 1,000,000 bbls. of petroleum can be noted in the shipments from Mexican ports of pirmary clearance during June as compared with the movement during the month of May. The loss in vessel shipments is chargeable to the heavier oils of the Panuco district. In fact if it had not been for a slight increase in the shipments of South Fields (light) production the loss would have been over 1,000,000 bbls., as the Panuco movement for June is placed at 6,896,266 bbls. as against 7,901,827 bbls. in May.

The June vessel movement totaled 11,207,575 bbls., a decrease of 682,694 bbls. as compared with June 1923. By ports the clearances were as follows: Tampico, 10,060,892 bbls.; Port Lobos, 411,733; Tuxpam, 734,950. By classes: crudes, 6,091,646; topped crudes, 4,297,-703; distillates, 221,797, while an item of bunker oils added to balance totaled 596,429 bbls.

The month of June witnessed the closing of two sea loading terminals in the Port Lobos district, i. e., The Texas Co., and the Atlantic Gulf Oil Corp.'s subsidiary (Agwi). The Texas Co. is running what little light production it has in the South Fields to Tampico by virtue of a pipe line agreement with the Mexican Gulf Oil Co., and the Agwi people have sold their production to Mexican Eagle Oil Co., as previously reported. Penn Mex Fuel Co. has resumed exports from its terminal at Tuxpam. One shipment of Panuco crude was made by Transcontinental Petroleum Co. (S. O. of N. J.) to San Pedro, Cal., during the month (24th, Ss. James McGee, 71,005 bbls.). Just why Mexican crude should be shipped to San Pedro is not known here, although it is possible that the cargo in question will be reconsigned on the Pacific Coast to Ioco, B. C., several cargoes of crude from this port having been consigned to the latter port a few years ago. This is mere surmise, however.

The detailed report follows:

FROM TAMPICO

By Huasteca Petroleum Co.
(Mexican Petroleum)

June.	Rig.	Vessel.	Destination—	Bbls.
1	Ss.	Cerro Ebano,	Providence.	*73,108
2	Ss.	Paul H. Harwood,	Galveston	*66,424
2	Ss.	Montana,	Boston	*63,679
5	Ss.	Inverarder,	Southampton.	*50,300
5	Ss.	W. L. Steed,	New Orleans	†75,651
6	Ss.	Mantilla,	Portland	*53,089
6	Ss.	J. M. Danziger,	Boston..	*64,610
6	Ss.	Norman Bridge,	Galveston	*38,767
7	Ss.	H. G. Wylie,	Jacksonville	*41,249
8	Ss.	E. L. Doheny III,	Providence	*74,119
8	Ss.	G. W. Barnes,	New York..	*57,875
9	Ss.	P. H. Harwood,	Galveston	*66,157
10	Ss.	Mirlo,	New Orleans.....	64,540
10	Ss.	Elisha Walker,	New York	*66,526
10	Ss.	Fueloil,	Miami	*14,507
10	Ss	Panoil,	Houston	*14,891
12	Ss.	C. A. Canfield,	Norfolk..	*58,879
13	Ss.	Cerro Azul, B. Aires y	Mont.	*73,130
13	Ss.	E. L. Doheny, Jr.,	New York	*69,343
13	Ss.	J. O. Boyd,	Baltimore..	†18,823
14	Ss.	Meline,	Boston	*62,146
14	Ss.	Mexoil,	Miami	*15,013
14	Ss.	C. Anderson,	New Orleans	*77,051
15	Ss.	Norman Bridge,	Port Tarafa, Cuba	*41,402
15	Ss.	Geo. G. Henry,	New York	*58,414
16	Ss.	F. Kellogg,	New York...	*59,151
17	Ss.	Wm. H. Doheny,	New York	*61,078
17	Ss.	Wm. Green,	New York	*63,078
18	Ss.	Paul Harwood,	Galveston.	*64,438
19	Ss.	Inverleith,	Southampton..	*56,031
20	Ss.	Cerro Ebano,	New York...	*71,855
20	Ss.	Panoil,	Tampa	*14,774
21	Ss.	E. L. Doheny,	Panama...	*59,938
21	Ss.	Mendocino,	Boston	*61,894
22	Ss.	Nora,	New York	*70,808
23	Ss.	S. M. Spalding,	New Orleans	*64,002
23	Ss.	C. Anderson,	New Orleans	†77,269
24	Ss.	Mirlo,	New York	*61,446
25	Ss.	H. G. Wylie,	Tampa	*41,177
25	Ss.	Mexoil,	Houston	*14,692
26	Ss.	J. M. Danziger,	New Orleans	63,962
27	Ss.	G. W. Barnes,	New York..	*55,996
28	Ss.	Harold Walker,	New York	*61,597
30	Ss.	P. H. Harwood,	Galveston	*63,323
30	Ss.	C. A. Canfield,	Galveston	*60,002
30	Ss.	E. L. Doheny III,	Rio Janeiro	*83,359
		Bunker deliveries		179,014
		Total		2,768,582

By Transcontinental Petroleum Co.

June.	Rig.	Vessel.	Destination—	Bbls.
2	Ss.	Baytown,	Baytown	23,984
2	Ss.	Baton Rouge,	Baton Rouge	49,228
2	Ss.	Corning,	Tampa	48,349
4	Ss.	Pioneer, Antilla and	Freston	44,744
4	Ss.	S. B. Hunt,	Baton Rouge	67,389

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5	Ss.	Caloria, Puerta Padre ..	30,035
6	Ss.	Potomac, Southampton ..	*29,680
8	Ss.	Swiftlight, Fall River....	70,793
9	Ss.	Baytown, Baytown	24,011
10	Ss.	Mascomono, New York...	41,180
11	Ss.	Camden, Baytown	60,931
12	Ss.	Mirita, New York	52,728
12	Ss.	Trontolite, Montreal	54,827
12	Ss.	Massasoit, New York	40,183
12	Ss.	J. M. Cudahy, New York	61,162
13	Ss.	Corning, Jacksonville.....	48,461
15	Ss.	Vaba, New York	44,410
16	Ss.	Niobe, Baltimore	69,078
16	Ss.	John Worthington, New York	67,781
16	Ss.	Baytown, Baytown, ...	24,140
16	Ss.	Housatonic, London	*48,943
17	Ss.	Halsey, Baytown	57,950
18	Ss.	Caloria, New Orleans ...	29,934
19	Ss.	Mexicano, Cuba	18,954
19	Ss.	Astec, Fall River	49,860
19	Ss.	Baton Rouge Key West...	49,958
20	Ss.	Pioneer, Tampa	48,874
20	Ss.	Kekoskee, New York	45,258
21	Ss.	Muskogee, Porto Rico ...	42,755
21	Ss.	Muskogee, Porto Rico	*16,560
23	Ss.	G. H. Jones, Baytown	65,320
24	Ss.	James McGee, San Pedro, Calif.	71,005
24	Ss.	Olna, Antwerp	*53,207
25	Ss.	Baytown, Baytown	24,079
26	Ss.	Kennebec, Southampton..	*49,129
27	Ss.	Corning, Baton Rouge...	49,639
28	Ss.	H. M. Flagler, Montreal..	63,067
29	Ss.	Baton Rouge, Mariel Cuba	46,868
29	Ss.	Durango, Baltimore	59,256
29	Ss.	Princeton, Charleston	49,212
		Bunker deliveries	88,388
		Total	2,048,651

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(Royal Dutch-Shell)

June.	Rig.	Vessel. Destination—	Bbls.
2	Ss.	Dosina, Rotterdam	*45,983
5	Ss.	British Light, Boston	56,024
5	Ss.	Anomia, Marseilles	42,023
5	Ss.	Conus, Las Palmas	*50,218
8	Ss.	San Roberto, Havre	*52,636
8	Ss.	Chas. M. Everest, London	53,643
8	Ss.	Scot. Borderer, Panama..	*59,708
9	Ss.	F-Sulphur 1, Freeport...	17,214
10	Ss.	Scot. Standard, London...	*56,396
11	Ss.	Acasta, Houston	*44,750
12	Ss.	S. B. Fuller, Hamburg ...	*60,873
13	Ss.	Davanger, London	*67,435
15	Ss.	San Eduardo, Lisbon	*49,380
15	Ss.	F-Sulphur 1, Freeport ...	18,808
16	Ss.	San Leopoldo, London ...	*24,522
17	Ss.	Brit. Light, New York ...	*55,355
18	Ss.	San Roberto, Lizard f/o.	*47,343
18	Ss.	F-Sulphur 6, Freeport ...	23,941
18	Ss.	San Patricio, Lizard f/o.	*87,448
18	Ss.	Huguenot, Ellesmere, U. Kingdom	54,161
21	Ss.	San Ricardo, Lizard f/o.	*50,841
23	Ss.	Montana, London	*58,112
23	Ss.	San Macedonio, Trieste and Venice	*43,495
25	Ss.	San Valerio, Lizard f/o..	*51,447
26	Ss.	San Nazario, Lizard f/o..	*85,102
28	Ss.	Acasta, Marseilles	*46,463
28	Ss.	San Tirso, Pernambuco ..	*48,506
28	Ss.	San Tirso, Pernambuco ..	† 3,863
29	Ss.	Malmanger, London	*56,354
29	Ss.	Cassimir, New York	44,000
30	Ss.	San Gerardo, Southampton	*83,806
		Coastwise deliveries	176,287
		Bunker deliveries	158,919
		Total	1,865,056

By Mexican Gulf Oil Co.

June.	Rig.	Vessel. Destination—	Bbls.
4	Ss.	Beaconoil, Boston	63,895
4	Ss.	Winifred, Houston	19,182
5	Ss.	Gulfpoint, Galveston	63,900
7	Ss.	Trinidadian, Port Arthur	24,458
7	Ss.	J. M. Guffey, Port Arthur	20,037
9	Brg.	Monongahela, Galveston..	16,723
9	Brg.	Connemaugh, Galveston...	15,964
10	Ss.	Gulfpoint, New Orleans..	62,208
11	Ss.	Sucrosa, Port Arthur ...	46,419
13	Ss.	Gulfstar, Port Arthur ...	65,768
13	Ss.	Currier, Port Arthur	47,193
14	Ss.	J. M. Guffey, Tampa....	19,045
15	Brg.	Juniata, Port Aruthur ...	12,981
15	Brg.	Conneaut, Port Aruthur..	17,093
17	Ss.	Gulftrade, Port Arthur...	67,249
18	Ss.	Ligioner, Port Arthur ...	30,303
18	Ss.	Sucrosa, Galveston	48,198
19	Brg.	Connemaugh, Port Arthur	16,879
19	Brg.	Monongahela, Port Arthur	16,722
23	Ss.	Gulfoil, Port Arthur	48,372
25	Ss.	Gulftrade, Port Arthur ..	66,905
26	Ss.	J. M. Guffey, Port Arthur	20,217
26	Ss.	Sucrosa, Galveston	49,019
26	Ss.	Ligonier, Savannah	30,057
27	Ss.	Trinidadian, Port Arthur	24,577
27	Ss.	Winifred, Port Arthur ...	19,568
28	Ss.	Gulfstate, Port Arthur ...	63,273
		Bunker deliveries	28,048
		Total	1,023,253

By Mexican Sinclair Petroleum Corp.

June.	Rig.	Vessel. Destination—	Bbls.
1	Ss.	Gene Crawley, Pt. Arthur	30,855
2	Ss.	Mirita, Texas Citq	57,220
4	Ss.	Beaconlight, Boston	65,340
6	Ss	Alabama, Cuba	26,977
7	Ss	A. E. Watts, New Orleans	68,334
9	Ss.	E. V. R. Thayer, Fall River	66,354
8	Ss.	W. L. Connelly, Pt. Limon and Bocas, C. A.	31,131
11	Ss.	Harry Luckenbach, Fall River	50,368
14	Ss.	W. B. Thompson, New Orleans	65,062
15	Ss.	E. W. Sinclair, Cuba	45,520
17	Ss.	J. F. Farrell, Texas City..	64,892
20	Ss.	Madrono, New Orleans ...	57,190
20	Ss.	Harry Farnum, Houston..	31,416
20	Ss.	A. E. Watts, Cuba	64,809
21	Ss.	Vaarli, New York	54,301
23	Ss.	Gene Crawley, Bocas del Toro, C. A.	32,253
25	Ss.	E. W. Sinclair, Cuba	44,471
28	Ss	Harry Farnum, Jacksonv'le	31,599
28	Ss	Madrono, New Orleans ...	55,646
		Bunker deliveries	19,638
		Total	963,476

By East Coast Oil Co

June.	Rig.	Vessel. Destination—	Bbls.
4	Ss.	Torres, Galveston	50,992
6	Ss.	Topila, New Orleans	50,119
8	Ss.	Tamiahua, Galveston	55,814
16	Ss.	Tamiahua, Galveston	56,463
20	Ss.	F-Sulphur 1, Freeport...	18,316
21	Ss.	Topila, Galveston	49,311
26	Ss.	F-Sulphur 1, Freeport ...	17,651
25	Ss.	Tamiahua, Galveston ...	85,353

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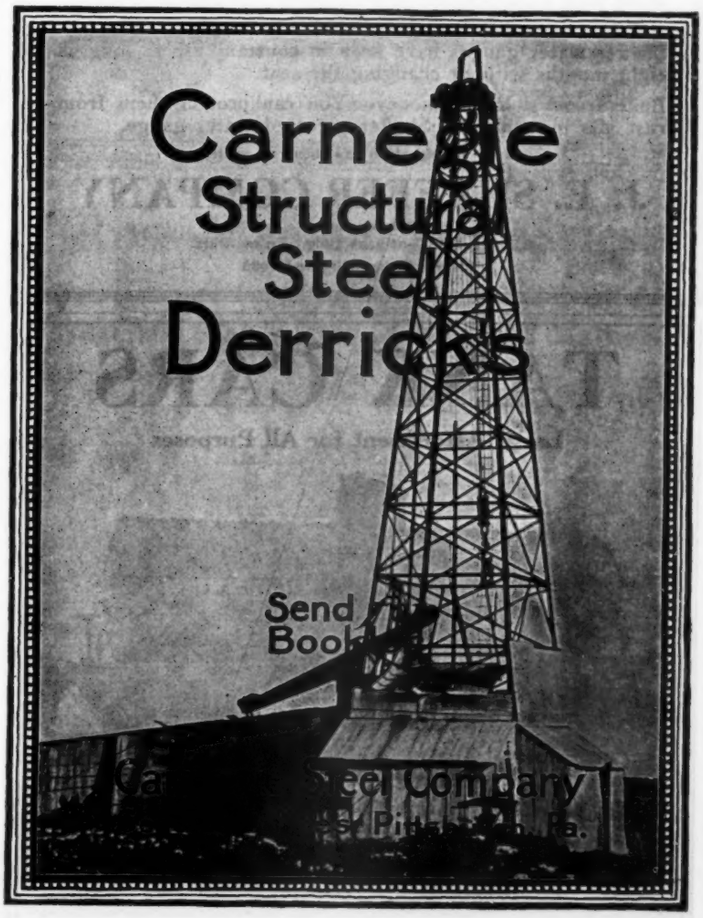

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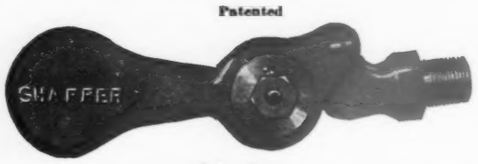

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28	Ss.	F-Sulphur 6, Freeport ...	23,812
		Bunker deliveries	8,518
		Total	476,349

By Empire Gas & Fuel Co.

June.	Rig.	Vessel. Destination—	Bbls.
4	Ss.	F-Sulphur 1, Freeport ...	17,925
5	Ss.	Dora, Fall River	50,286
7	Ss.	F-Sulphur 6, Freeport ...	21,613
21	Ss.	Scot. Musician, Bayonne.	57,348
25	Ss.	Dora, Fall River	48,910
		Coastwise deliveries (V. C.)	88,007
		Total	284,089

By New England Fuel Oil Co.

June.	Rig.	Vessel. Destination—	Bbls.
10	Ss.	Toco, Tocopilla	60,769
28	Ss.	Scot. American, Holland ..	54,583
30	Ss.	Chuky, Tocopilla	57,058
		Bunker deliveries	12,879
		Total	185,289

By Pierce Oil Corp.

June.	Rig.	Vessel. Destination—	Bbls.
9	Ss.	Appalachee, Manchester, England	*30,260
21	Ss.	Shreveport, Philadelphia.	*62,047
25		Chestersun, Philadelphia	*68,377
		Bunker deliveries	3,915
		Total	164,599

By The Texas Co.

June.	Rig.	Vessel. Destination—	Bbls.
10	Ss.	Louisiana, Antilla, Cuba.	26,192
16	Ss.	Occidental, Port Arthur..	32,217
24	Ss.	Pennsylvania, Providence	*54,656
25	Ss.	Louisiana, Guayanilla, P. R.	25,634
		Bunker deliveries	9,750
		Total	148,449

By Panuco Boston Oil Co.

June	Rig	Vessel, Destination—	Bbls.
21	Ss.	Golaa, Philadelphia	52,567
23	Ss.	Cedarhurst, Philadelphia .	43,741
		Total	96,308

By Mexican Eagle Oil Co.

		Coastwise deliveries	36,791

FROM PORT LOBOS

By Transcontinental Petroleum Co.

June.	Rig.	Vessel. Destination—	Bbls.
7	Ss.	Mevania, Baltimore	75,008
17	Ss.	John Worthington, New York	13,327
19	Ss.	Calgarolite, Baltimore ...	86,191
29	Ss.	H. M. Flagler, Montreal..	21,849
		Total	196,375

By Cia. del Agwi, S. A. (Atlantic Gulf)

June.	Rig.	Vessel. Destination—	Bbls.
12	Ss.	Agwimoon, Boston	74,302
27	Ss.	Agwimex, Boston	95,114
		Total	169,416

By The Texas Co.

June.	Rig.	Vessel. Destination—	Bbls.
2	Ss.	Louisiana, Port Arthur...	1,689
2	Ss.	Louisiana, Port Arthur ..	†25,091
18	Ss.	Occidental, Port Arthur ..	19,162
		Total	45,942

FROM TUXPAM

By Mexican Eagle Oil Co.

June.	Rig.	Vessel. Destination—	Bbls.
9	Ss.	San Fernando, South America	*109,846
12	Ss.	San Zotico, New York..	*31,761
20	Ss.	San Patricio, Lizard f/o..	* 8,401
23	Ss.	San Ricardo, Lizard f/o..	* 3,618
24	Ss.	San Lorenzo, B. Aires y Mont	*98,034
26	Ss.	San Valerio, Lizard f/o ..	* 2,423
27	Ss.	San Nazario, Lizard f/o ..	*15,253
27	Ss.	San Florentino, B. Aires y Rio	*106,936
30	Ss.	San Tirso, Pernambuco...	* 3,076
		Coastwise deliveries	†21,100
		Coastwise deliveries	89,441
		Bunker deliveries	87,360
		Total	577,249

By Pena Mex Fuel Co.

June	Rig	Vessel, Destination—	Bbls.
18	Ss.	Swiftwind, Fall River ...	79,113
28	Ss.	Swiftsure, Fall River	78,588
		Total	157,701

June Summary

From—	Bbls.
Tampico	10,060,892
Port Lobos	411,733
Tuxpam	734,950
Total June 1924	11,207,575
Total June 1923	11,890,269
Decrease	682,694

Division of Movement

To—	Bbls.
United States	7,282,589
United Kingdom	1,060,648
South America	644,577
Continent	448,643
Mexican coastwise	411,626
Canada	135,743
Cuba	390,072
Panama	119,646
Central America	63,384
Azores	50,218
Bunkers (to balance)	596,429
Total	11,207,575

*Denotes topped crude; †denotes distillates

GASOLINE CAR ON P. R. R.

PHILADELPHIA, July 26.—In an effort to decrease operating expenses on the Springfield branch of the Middle Division of the Pennsylvania Railroad, a trial run was made recently with a gasoline car manufactured by J. G. Brill Co. The car traveled from Philadelphia to Altoona on its own power. It is equipped with a 70 horsepower motor and can travel 38 miles an hour pulling a trailer used for baggage. The car seats 44 passengers.

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Weather Conditions In N. W. Pennsylvania Handicapped Market

By George Turnbull

OIL CITY, Pa., July 28.—Expectations of refiners at the first of the year for a prosperous 12 months for the oil industry failed of realization in the Northwestern Pennsylvania refined district during the first six months of the year. At the start of the last half of the year the outlook for the future is anything but bright.

At the start of the year crude oil production was on the decline and the movement of the production curve downward was very pronounced. Since that time it has increased gradually although not in the same great proportions as was the case during the same period last year. When 1924 first arrived the outlook for huge consumption of gasoline was most excellent. The amount of gasoline used has been large but not as great as would have been the case but for the backward spring. Another element that has had a great bearing on the refined oil market during the first half of the year has been the depression in business, which has cut down the amount of lubricating oil purchased.

All the products experienced considerable fluctuation in both price and demand during the period under review.

Motor gasoline was lowest in price at the start of the year when refineries were receiving only 10¼ cents for it. This grade reached its high mark during the first part of February when it was quoted at 15 cents. At the close of the half year the prevailing quotation was 12¼ cents.

Kerosene reached its lowest price at the close of the period. At the start of the year the 45 grade was bringing 7½ cents. It reached 8 cents during February and then started on a slow but steady decline which was maintained until the close of June.

Fuel oil of the 30-40 grade was quoted at 5 cents on January 1. It reached its highest point 5½ cents in February, March and a part of April and by the close of June had declined to 5⅛ cents.

Six hundred steam refined experienced considerable of a price range during the six month period. At the start of the year it was quoted at 14¼ and then advanced to 23 cents at the close of April. At the finish of the period it was only worth 18¼ cents.

Wax also varied much in price, the 122 grade starting at 3⅝, ranging upward to 6¼ at the close of April and then to 4⅜ at the close of June.

AMERICAN LOOKS INTO BRITISH OIL FRAUDS

LONDON, July 26.—Edward A. Schwab of the American National Vigilance Committee, conferred with Chief Inspector Heldon of Scotland Yard concerning an organization which is alleged to have sold more than £1,000,000 worth of bogus oil shares in Great Britain and the United States.

Mr. Schwab has a list of 3,000 persons here who, he claims, parted with nearly £500,000. The Daily Mail quotes him as saying that the master-brain of the organization is now in London and, with the help of the police, he expects speedily to lay hands on him.

Scotland Yard, however, has suggested to Mr. Schwab that this alleged fraud is not an extraditable offense. Mr. Schwab believes that the investigations of the police will convince them to the Contrary.

OPENS BLACKWELL STORE

The Robinson Packer Co. of Tulsa, has opened a store in the Larkin Hotel Building, Blackwell, Okla., with F. W. Jensen in charge. The company's factory is located at Coffeyville, Kans.

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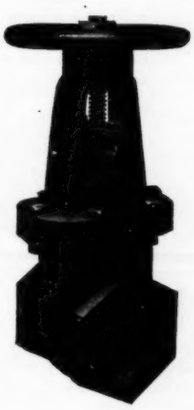

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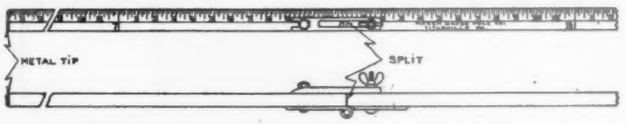

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Russia Said to Be In Best Position on Persian Oil Grant

Col. Merian C. Cooper, arrived in Paris from a six months' exploring trip in Persia, is reported in the New York Times as saying the fight for Persian oil was not between England and America alone, as represented by the Anglo-Persian and Standard Oil and Sinclair interests, but was a three-cornered one, with Russia in the third corner, apparently in the best position.

"Russia is determined to have the concessions in the five northern Persian departments which were controlled by Russian interests before the war," Colonel Cooper said. "An Armenian, who is a Russian subject and the holder of a large interest in these pre-war concessions sold his interests to English investors. At the same time the Sinclair interests have practically tied up the Persian Government in a new concession in the same district. Russia, however, refuses to recognize either of these concessions as valid and is demanding that the rights be given her. And certainly she appears to be in the strongest position. The moderation of the treaty she made with Persia after the invasion of 1920 and the fact that she has chased the English out of the northern provinces have given her the greatest prestige there, and she is using her best diplomatic efforts to take advantage of this.

"It is also the Russian aim to prevent American capital from building a railroad across Northern Persia. England, too, is fighting the Americans in this and the British Government is using the loan made to Persia in war time as a very effective weapon. If Americans get the concessions, the British will demand repayment of the loan. As this means a lien on Persian oil, taxes and customs duties—which are Persia's only source of income—the railroad will necessarily immediately become a bad bargain."

J. H. BRINK WILL OPEN INDIANA HEADQUARTERS

OIL CITY, Pa., July 25.—J. H. Brink, one of the best known oil marketers in New York State, has just been engaged by the Pennzoil Oil Co., whose main headquarters are in this city, to open the State of Indiana for the business of this concern. He left on Friday afternoon after a conference with Pennzoil officials here for Indianapolis, which he will make the Penzoil headquarters for Indiana.

Mr. Brink states tnat Pennzoil will operate its own station in Indianapolis and from this as a center will conduct operations all over the State. It will handle only lubricants there, specializing on Pennzoil motor oils, which are made from 100 per cent Pennslyvania crude oil. It will have a bulk station and warehouse at Indianapolis.

Mr. Brink is no new man with the Pennzoil organization, having been connected with it the most of the time since its purchase of the Warren Oil Co. in New York State some time ago. Mr. Brink started with the Standard Oil Co. of Indiana in Indiana in 1913 and was with that concern for a period of six years. He then became a member of the Paragon Refining organization, first at Toledo and later in New York State. For a number of years past he has made Syracuse his headquarters.

Mr. Brink has been the secretary of the New York State Petreleum Marketers' Association since its organization more than two years ago.

FILLING STATION CHARTER

The Vivian Oil & Gasoline Co., of Vivian, Caddo Parish, Louisiana, has been incorporated to operate filling stations and sell automobile accessories, capital stock, $30,000. Officers are W. T. Caldwell, president; W. J. Keel, vice president; and T. F. Holt, secretary and treasurer.

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Six Months' Output Of Autos Fraction Less Than Year Ago

BUFFALO, N. Y., July 25.—The number of motor cars manufactured in the United States in the first six months of 1924 decreased 1½ per cent, in comparison with the number in the corresponding period of 1923, it was stated in reports submitted to the directors of the National Automobile Chamber of Commerce meeting here.

The total number of motor vehicles manufactured in the first half of this year was 2,002,084. The number for the first half of last year was 2,030,093. Exportation of cars still is increasing, the reports said.

Production of motor vehicles in June, as reported by the Automobile Chamber of Commerce, totaled 249,868, compared with 312,813 in May, and 378,575 in June 1923. Production was the smallest for any month since January, 1923, and 35 per cent below the peak month of May, 1923. The June production, however, was larger than for any month prior to 1923.

MANY THOUSAND SAVED TO TANK CAR OWNERS

A saving of many thousands of dollars to owners of tank cars carrying petroleum products was effected recently by the decision of the Interstate Commerce Commission on Docket 14942, General Petroleum Corp. Vs. the Chicago, Burlington & Quincy Railroad Co.

The commission found that charges assessed for the return movement of privately owned tank cars after the release of the railroads from federal control, which had moved loaded during the period of federal control, were not applicable. The final paragraph of the commission's decision is as follows: "We find that the equalization rule was not applicable to the shipments in question made during federal control of which the empty cars were returned subsequent thereto, and that the charges assailed are illegal. The defendant should cancel its bills accordingly."

The complainant alleged in its petition that the charges for movement of three empty tank cars, owned by the plaintiff, from Norwood and Providence, R. I., to Los Angeles, during March, 1920 were unreasonably, unjustly discriminatory, unduly prejudicial and illegal. The proceeding grew out of the application of the so-called "rule for equalization of empty and loaded tank car mileage," at the beginning and ending of the federal control of carriers.

Carriers had been accustomed to move empty tank cars without charge when empty mileage equalled loaded mileage. When the aggregate empty mileage exceeded the aggregate loaded mileage over a period the owners were charged for this excess empty mileage, while an excess loaded mileage acted as a credit against future movement of empties.

The efficacy of this method depended upon the balancing of outgoing and incoming tank car mileage. During the war abnormal market channels were created, train loads of petroleum products were rushed across the country without regard to routing instructions so that shippers were unable to balance loaded and empty mileage. Resumption of private control accordingly involved assumption of the loaded mileage secured during federal control, according to the decision of the commission.

GASOLINE TAX UPHELD

OKLAHOMA CITY, July 25.—The State Supreme Court has upheld the decision of the district court at Muskogee in confirming the constitutionality of the gasoline tax. The action was brought by A. J. Edwards as a friendly suit to determine whether the gasoline tax would hold. The suit was filed originally against the State auditor and members of the State Highway Commission.

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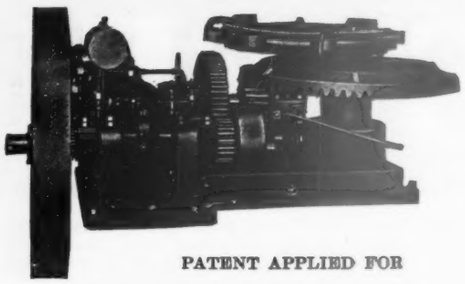

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Industry Gambling On Shortage Which Failed to Appear

Joseph E. Pogue, oil engineer, interviewed by the financial editor of the New York Evening Post, says:

"The main trouble is that the oil industry has been gambling on a shortage that has refused to appear. It has expected production to decline and has hoarded its stocks of products. As soon as a barrel is drawn from storage the cry for more production starts. Improved methods of wildcatting and refining meanwhile have kept production on the upgrade.

"Under these conditions stocks have grown and grown. Due to losses from evaporation, interest charges, fire insurance and the like, it costs about 10 per cent a year to carry the stocks. Some of the oil now in tanks has been there for seven years. The book value of the inventories has been rising.

"And here, a peculiar attitude that the industry has adopted is a factor. In most industries executives are willing to liquidate surplus products at low prices. That is a well-understood necessity. The oil industry seems utterly unwilling to do so. Its idea seems to be that inventories only should be liquidated at a profit."

Touching the claim that stocks, while large, are not growing when expressed in number of days' supply at current rates of consumption, Mr. Pogue said:

"That is an idea that has caused an awful lot of trouble. The point is that it doesn't work out. I know a company that tried to run its business on the number of days' supply theory. It took heavy losses. There is no correlation between prices and the number of days supply.

"Recently, the industry has been trying to starve off price reduction. Purchasing companies have tried out a program of prorating runs. Prorating is, however, no substitute for price reduction. When the big companies take only half the oil offered them the little fellows simply take their surplus off and undersell the market with it. The result is the same in the long run. Early and drastic price reduction would be a much better policy. Prorating delays the cure and aggravates the disease."

Fix Gasoline Price "By Public Opinion" New Nebraska Idea

OMAHA, Neb., July 25.—Nebraska will regulate the retail price of gasoline by "the force of public opinion," if a plan proposed to Governor Bryan by Ben Elrod and E. E. Howell of Omaha should be adopted. Incidentally, there is small chance that the plan will be adopted.

Elrod and Howell are proprietors of the first cut-rate gasoline filling station in Omaha, with the exception of the Omaha municipal station. The Elrod-Howell station started the cutting of prices but when their competitors cut below them, they sold out their supply of gasoline and then closed their station. After prices return to normal they say they will reopen. They have appealed to Governor Bryan to 'stabilize' the prices which they themselves assisted so materially in rendering unstable.

The Elrod-Howell plan, as proposed to the Governor, and which they claim will stabilized the price of gasoline all over the State, is that Governor Bryan, each week, is to make public a "fair price" for gasoline, taking into consideration freight rates and then adding a profit of 3 cents per gallon over the refinery price. The governor will have no power to enforce this "fair price," but its proponents claim that 'the force of public opinion will cause the adoption of this price."

The Governor is reported to have said he will "consider" the plan at his convenience.

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California's Output First Half of 1924 Shows Big Decline

The production of oil in California for the first half of 1924 was 118,113,000 bbls. as compared with 146,338,069 bbls. for the last half of 1923, a decrease of 28,225,000 bbls., according to the California State Mining Bureau. The average daily production at the first of 1924 was 700,300 bbls., declining to 619,500 bbls. on July 1 and shows a steady but gradual decline from the peak of production which occurred during the fall of 1923.

While the production decline of the State has been gradual the decline of the three prolific fields, Santa Fe Springs, Long Beach and Huntington Beach, which produced a large proportion of the oil, has been rather precipitous, but this was offset by additional development of good wells in the Torrance Field, discovery of the Dominguez Field with its large producers, extension of the eastern edge of Buena Vista Hills, Kern County, into highly productive territory, and the resumption of closed in production in the older fields of the State.

Consumption also declined and more rapidly than production with the result that storage increased from about 92,000,000 bbls. on January 1, 1924, to about 100,000,000 bbls. at the end of June. The unexpected decrease in consumption was due to various causes among them being decreased demand for fuel oil by the largest consumers, the railroads, decreased demand for gasoline resulting from the hoof and mouth disease in California, decreased demand for gasoline east of the Rocky Mountains due to weather conditions and to the continued overproduction of oil in Mid-Continent fields. The last two factors no doubt account for the fact that the export of California oil to eastern and Gulf ports was 6,728,000 bbls. less during the first half of 1924 than during the previous six months. This amount accounts for practically all the storage increase in the State during the first half of this year.

Classified Wants
Pages 158-159

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE REPORT FOR MAY

Runs

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,596,000	116,000
Gulf Pipe Line Co.	1,035,249	33,395
Texas P. L. Co.	469,448	15,143
Magnolia Petroleum Co.	1,152,274	37,170
Empire Pipe Line Co.	868,876	26,092
Cosden Pipe Line Co.	815,635	26,311
*Sinclair Pipe Line Co.	1,240,000	40,000
*Other lines	7,378,000	238,000
Total May	16,495,482	532,112
Total April	15,559,656	518,655
Difference	935,826	13,457

Shipments

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,658,266	118,009
Gulf Pipe Line Co.	1,106,034	35,679
Texas Pipe Line Co.	466,978	15,063
Magnolia Petroleum Co.	1,138,580	36,728
Empire Pipe Line Co.	706,345	22,785
Cosden Pipe Line Co.	813,356	26,237
†Sinclair Pipe Line Co.	1,919,354	61,912
Other lines	7,285,000	235,000
Total May	17,093,913	551,413
Total April	16,435,126	547,841
Difference	658,787	3,572

Stocks

*Prairie Oil & Gas Co.	22,500,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	9,361,019
The Texas Co.	6,937,335
Magnolia Petroleum Co.	8,349,769
Empire Pipe Line Co.	3,097,235
Cosden Pipe Line Co.	2,953,548
*Sinclair Crude Oil Purchasing Co.	28,850,000
Carter Oil Co.	17,877,416
*Other lines	8,600,000
Total May	110,526,322
Total April	110,013,306
Difference	513,016

*Estimated. †Includes shipments of Texas crude.

Note—Stocks do not include approximately 8,100,000 bbls. of crude oil held in storage on private tank farms and leases.

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May, '24.	June, '24.
Nat. Transit	199,626.14	185,964.53
S. W. Pa. P. L.	85,544.16	84,784.18
Eureka P. L.	372,494.35	360,470.64
Buckeye P. L. (Macksburg)	258,024.34	245,849.66
Buckeye P. L. (Cleveland)	15,210.59	15,114.06
Buckeye P. L. (Lima, etc.)	145,504.50	149,617.93
Indiana P. L.	12,812.12	13,211.64
Cumberland P. L.	372,609.80	352,152.78
N. Y. Transit	19,947.74	19,920.01
Tidewater P. L.	152,075.52	146,705.68
Pure Oil P. L.	188,558.69	180,842.04
Emery P. L.	35,511.41	35,188.79
Indian Refining	#66,447.27	60,342.51
Paragon Dev.	41,802.11	34,461.48
Pittsburgh P. L.	8,903.97	7,792.56
Swiss P. L.	.....	.....
Riggs Refining	5,124.29	4,582.41
Total	1,980,197.00	1,896,900.90
Daily average	63,941.84	63,230.03

—Note: Indian Refining Co. also reported other receipts of 309,849.78 bbls. Paragon Refining Co. had other receipts of 142,866.43 bbls. Paragon Development Co. had other receipts of 4,510.65 bbls. Pittsburgh Pipe Line had other receipts of 510.53 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May, '24.	June, '24.
National Transit	373,131.02	349,447.12
S. W. Pa. P. L.	253,585.74	236,010.50
Eureka P. L.	112,059.21	123,095.03
Buckeye P. L. (Macksburg)	100,473.73	325,987.67
Buckeye P. L. (Cleveland)	1,214.64	1,451.07
Buckeye P. L. (Lima, etc.)	680,684.61	601,546.36
Indiana P. L.	931,269.90	830,895.76
Cumberland P. L.	151,162.89	133,254.79
Southern P. L.	.....	7,735.85
Crescent P. L.	.....	.....
N. Y. Transit	507,491.63	668,690.48
Northern P. L.	80,309.14	120,463.56
Tidewater P. L.	130,310.85	121,407.61
Pure Oil P. L.	204,887.66	167,288.07
Emery P. L.	38,385.97	43,773.94
Faragon Ref.	181,821.26	154,584.15
Indian Ref.	381,740.52	348,715.10
Paragon Dev.	44,760.63	45,650.74
Pittsburgh P. L.	11,634.19	10,292.56
Total	4,184,923.59	4,290,290.36
Daily average	134,997.50	143,009.68

Note: Indian Refining Co. also reported other deliveries of 91.80 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of May and June were as follows:

	May, '24.	June, '24.
National Transit.	969,330.61	927,391.38
S. W. Pa. P. L.	740,981.21	756,214.63
Eureka P. L.	1,910,892.33	1,857,807.14
Buckeye P. L. (Macksburg)	576,679.85	454,683.96
Buckeye P. L. (Cleveland)	16,959.02	33,775.28
Buckeye P. L. (Lima, etc.)	3,184,697.93	3,506,557.58
Indiana P. L.	628,594.63	617,911.92
Cumberland P. L.	568,123.90	583,831.12
Southern P. L.	512,524.99	596,507.15
Crescent P. L.	80,724.80	77,167.35
N. Y. Transit	704,366.99	725,304.69
Northern P. L.	763,364.39	719,712.09
Tidewater P. L.	.....	.....
Pure Oil P. L.	359,265.93	373,121.94
Emery P. L.	21,790.55	13,932.36
Paragon Ref.	175,717.01	166,689.08
Indian Ref.	101,113.46	118,244.29
Paragon Dev.	11,370.55	8,834.23
Pittsburgh P. L.	7,521.89	5,683.28
Swiss P. L.	.....	.....
Riggs Ref.	1,299.14	834.95
Total	11,335,309.07	11,544,204.42
Increase	412,566.99	208,895.35

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of May and June, showing the gross stocks of the above fields:

	May, '24.	June, '24.
Pennsylvania	3,923,093.00	3,668,678.80
Lima	1,113,472.67	1,150,446.32
Kentucky	1,441,241.81	1,518,177.30
Mid-Continent	4,779,382.96	5,135,399.33
Illinois	78,118.62	71,502.67
Total	11,335,309.07	11,544,204.42

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1921	1922	1923	1924
January	64,460	67,702	75,790	62,638
February	70,054	75,096	71,093	68,023
March	68,555	78,531	76,592	68,721
April	65,036	75,462	75,614	71,058
May	65,466	77,592	77,365	63,942
June	62,438	76,193	77,593	63,230
July	69,468	76,795	71,879	.....
August	64,888	73,387	76,910	.....
September	60,110	78,512	72,358	.....
October	57,688	77,209	76,256	.....
November	58,470	75,313	70,762	.....
December	61,000	73,351	69,271	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania Lima and other fields for past four years:

	1921	1922	1923	1924
January	116,550	119,792	171,067	145,518
February	96,736	111,362	164,219	148,732
March	84,168	127,753	185,487	147,098
April	101,015	127,068	170,751	147,611
May	100,253	127,840	177,102	134,997
June	105,037	137,638	173,598	143,010
July	97,096	137,872	168,330	.....
August	101,652	153,275	142,766	.....
September	117,440	158,761	137,266	.....
October	105,728	165,345	134,597	.....
November	121,803	165,677	131,426	.....
December	104,023	172,861	139,909	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields including oil received from other lines at the close of each month for the past three years:

	1922	1923	1924
January	16,297,858	14,040,567	12,907,[illegible]
February	17,009,293	14,028,437	11,544,[illegible]
March	16,877,937	13,873,146	10,906,[illegible]
April	16,777,842	13,737,575	10,932,[illegible]
May	16,948,962	13,815,622	11,335,[illegible]
June	16,810,169	14,641,253	11,544,[illegible]
July	16,669,286	14,645,584	.....
August	16,235,220	14,770,539	.....
September	16,228,545	14,803,444	.....
October	15,757,746	14,504,111	.....
November	15,171,972	14,157,726	.....
December	14,323,765	13,444,361	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts.	Shipments.	Stocks
1923—			
June	2,927.71	4,743.78	21,[illegible]
July	2,996.64	1,471.57	23,[illegible]
August	3,199.07	3,769.34	22,[illegible]
September	2,829.79	5,822.38	19,[illegible]
October	2,694.23	5,251.81	17,[illegible]
November	2,980.66	4,150.98	16,[illegible]
December	2,893.07	3,499.27	15,[illegible]
1924—			
January	2,942.19	8,641.71	9,[illegible]
February	2,151.78	1,926.55	10,[illegible]
March	3,398.78	1,716.28	11,[illegible]
April	3,311.84	2,066.78	13,[illegible]
May	3,036.50	5,328.31	10,[illegible]
June	3,188.31	407.01	13,[illegible]

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, July 1	2,216,[illegible]
Runs from wells	695,[illegible]
Other receipts	120,[illegible]
Regular deliveries	474,[illegible]
Other deliveries	336,[illegible]

The amount of Illinois oil run by the Tide Water Pipe Line Co. in June was 29,358.53 bbls., and deliveries were 53,[illegible] bbls. Adding these figures to those of the Illinois Pipe Line Co., makes the runs and deliveries from the Illinois field as follows:

	Runs.	Deliveries.
1923—		
June	582,511.82	609,[illegible]
July	594,653.42	489,[illegible]
August	594,747.94	367,[illegible]
September	542,561.59	305,[illegible]
October	576,867.09	347,[illegible]
November	546,859.43	285,[illegible]
December	534,185.04	283,[illegible]
1924—		
January	493,337.25	280,[illegible]
February	535,490.70	353,[illegible]
March	611,289.36	369,[illegible]
April	514,356.43	339,[illegible]
May	751,080.44	510,[illegible]
June	725,060.87	530,[illegible]

The Tide Water Pipe Co. Ltd., also delivered in June, 219,002.93 bbls. of Oklahoma oil. The total deliveries of all grades by the Tide Water were 394,380.87 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Av. bbls. per wk.—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
January	138,800	15,400	665,400	160,400	100,600	1,080,600	.....	172,000	.....	.....	172,000	1,252,600
February	90,250	36,250	832,000	208,250	36,250	1,203,000	.....	195,250	.....	.....	195,250	1,398,250
March	42,455	17,388	623,455	209,321	77,455	970,067	.....	.....	.....	.....	.....	970,067
April	39,669	17,969	614,369	88,200	52,269	812,476	.....	.....	.....	.....	.....	812,476

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Av. bbls. per wk.—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
November	67,200	108,869	270,669	122,500	195,060	764,200	345,490	359,331	147,449	33,267	885,731	1,646,131
December	106,000	133,679	340,254	144,739	300,546	924,217	420,224	492,700	186,949	51,258	1,151,140	2,075,357
January	112,800	118,200	552,000	97,800	215,800	603,200	358,800	248,000	137,800	20,800	773,200	1,538,800
February	134,750	175,750	195,250	102,750	299,250	907,750	372,500	296,000	190,250	36,500	895,250	1,803,000
March	148,358	141,806	253,453	124,642	293,643	990,906	463,806	365,358	223,552	55,545	1,108,261	2,099,167
April	152,369	154,931	319,900	94,963	248,969	971,131	382,900	348,131	119,000	15,869	865,900	1,837,031

GROSS PRODUCTION BY MONTHS AND DAILY AVERAGE IN THE U. S. FOR 12 MONTHS

1923—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Wyoming-Montana	Other fields	Total
June:	Month	22,667,106	15,572,730	9,129,282	2,797,830	3,401,172	2,086,670	3,470,176	3,413,155	62,538,121
	Daily average	755,570	519,091	304,309	93,261	113,372	69,322	115,672	113,771	2,084,604
July:	Month	25,262,082	15,260,184	11,258,042	2,448,566	3,713,738	1,882,481	4,245,547	3,334,110	68,004,750
	Daily average	814,906	492,264	382,518	78,986	119,798	60,725	136,953	107,552	2,194,702
August:	Month	26,440,005	14,049,076	12,157,429	2,316,320	3,292,580	1,952,349	4,290,406	3,479,077	67,977,242
	Daily average	852,903	453,196	392,173	74,720	106,212	62,979	138,400	115,969	2,193,216
September:	Month	25,762,487	12,812,220	12,879,682	2,234,730	3,164,900	1,787,430	4,561,550	3,269,551	66,472,550
	Daily average	858,750	427,074	429,323	74,491	105,497	59,581	152,052	105,468	2,216,750
October:	Month	24,576,400	12,961,782	15,933,382	2,336,346	3,120,274	1,837,990	3,540,886	3,475,912	67,782,980
	Daily average	792,787	418,122	513,980	75,366	100,654	59,290	114,222	112,126	2,186,612
November:	Month	23,397,848	12,334,620	15,556,507	2,268,840	2,973,000	1,816,860	4,792,466	3,138,464	66,278,605
	Daily average	746,595	411,154	518,550	75,628	99,100	60,562	159,783	104,615	2,175,987
December:	Month	21,899,247	12,232,259	10,065,856	2,345,150	4,017,850	1,919,574	3,304,326	3,147,812	58,932,074
	Daily average	706,427	394,589	324,705	75,659	129,608	61,922	106,591	101,543	1,901,045
1924—										
January:	Month	20,912,500	12,116,353	10,089,291	2,254,878	3,686,680	1,827,053	4,631,395	2,955,500	58,473,650
	Daily average	674,597	390,863	325,461	72,738	118,925	58,937	149,400	95,339	1,886,894
February:	Month	19,341,226	12,236,637	10,272,024	2,112,853	3,302,750	1,697,892	4,275,706	2,997,701	56,236,789
	Daily average	666,939	421,953	357,656	72,857	113,888	58,548	147,438	103,369	1,943,649
March:	Month	19,913,262	13,367,851	11,501,440	2,206,425	3,882,695	1,791,049	3,992,315	3,257,759	59,912,796
	Daily average	642,363	431,221	372,450	71,175	125,248	57,775	128,784	105,089	1,933,105
April:	Month	19,299,849	13,482,240	11,755,290	2,268,540	4,068,225	1,644,840	3,880,410	3,221,000	59,620,394
	Daily average	643,362	449,408	391,843	75,618	135,608	54,828	129,347	107,700	1,987,797
May:	Month	19,833,576	14,333,193	11,547,456	2,480,310	4,659,117	1,863,441	4,023,644	3,865,216	62,304,953
	Daily average	639,793	459,103	382,176	80,010	150,291	60,111	130,116	108,236	2,009,837
	Total 12 months	268,305,583	160,657,145	143,146,282	28,070,788	43,282,981	27,107,629	49,012,741	39,055,258	753,644,157
	Daily average	733,075	438,954	390,563	76,696	118,260	60,400	133,930	106,709	2,058,137

SAN FRANCISCO, CAL
Annual Review.
It will pay you to "give it a try."

Proven Right from the Start!

A REPORT OF HOW A LARGE COMPANY GOT STARTED ON A PROFITABLE GASOLINE PLANT

President: Mr. Jones, we are about ready to decide on that gasoline plant.

Mr. Engineer Jones: I've made my own survey of the proposition and have had the Hope Engineering and Supply Company make an independent report. Their engineers have made a complete analysis of the proposition—the gas available, gasoline content, equipment required, investment cost, production, and an estimate of the income to be anticipated. I've made their recommendations the backbone of my report. Here it is—

President: (after reading) Fine! I know we'll vote to go ahead right away.—But how? You can't drop your work—we can't spare you.

Engineer: I believe we ought to put the whole thing in Hope's hands. They are better equipped than we are—or anyone else I know of. They know plant design, know what equipment is necessary, the proper proportions—at any rate they'll submit the plans for our O. K. They have a construction organization available and can save us money on buying equipment too. I feel that they will build us a plant for less money and get it going quicker than we can ourselves.

President: You're right! They have made a wonderful reputation haven't they—50 or 60 plants and every one a credit to their Company. Let's get a Hope man down right quick to get things going.

Engineer: Miss Smith, put in a long distance call for the

ENGINEERS CONTRACTORS **HOPE** Engineering & Supply **COMPANY** DESIGNERS MANUFACTURERS

MT. VERNON, OHIO, U. S. A.

HES-14

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the postoffice at Tulsa, Okla., under the Act of March 3, 1879.

You will find in Kelly Kats the qualities you want

KELLY TRADE MARK REG. KATS THE TIRES WITH NINE LIVES

What quality in truck tires do you consider most important?

Is it traction? Kelly Kats get traction without chains on almost any kind or condition of road surface.

Is it cushioning? Kelly Kats give 50% more cushioning than solid tires because their distinctive construction makes them exceptionally resilient.

Is it mileage? Kelly Kats consistently deliver such remarkable mileage that they are called "the tires with nine lives."

Is it economy? Kelly Kats save dollars on the annual truck tire bill because they give such long mileage that their cost per mile is extremely low.

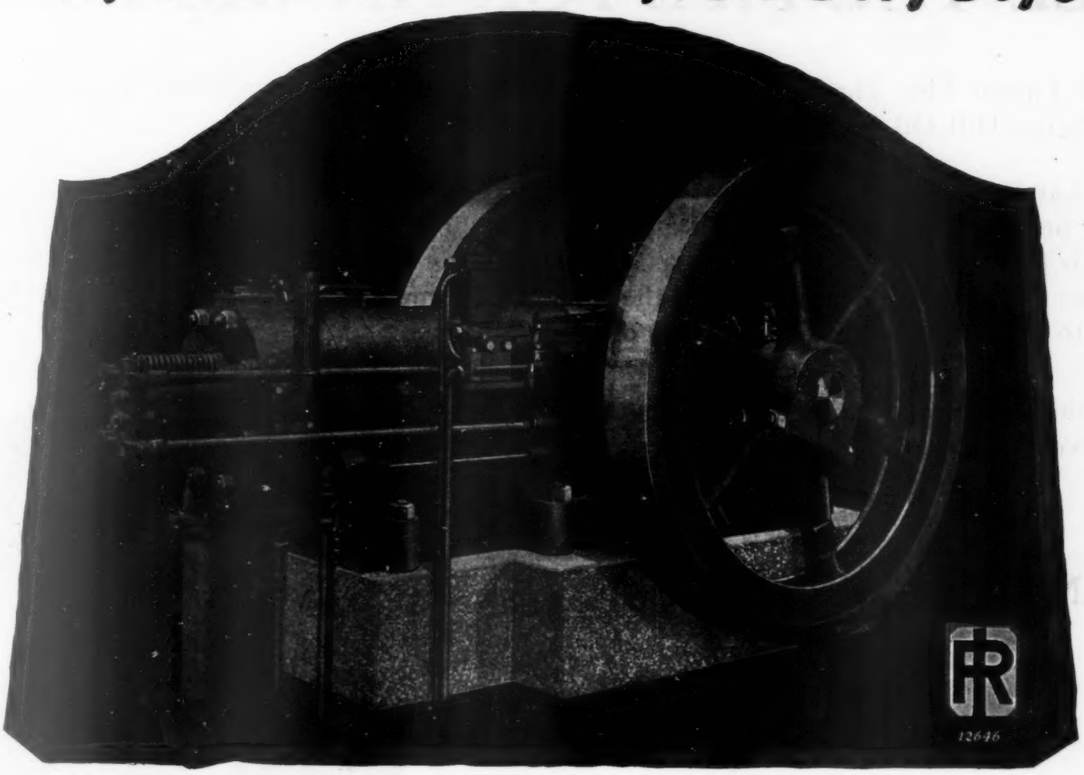
Whatever quality you consider most important in truck tires, you will get that quality in Kelly Kats—and in addition you will get ALL the other qualities a truck tire ought to have.

There are no Caterpillar tires but Kelly Kats

KELLY-SPRINGFIELD TIRE CO.
250 West 57th Street New York, N. Y.

It takes a tire of more than ordinary ability to make good on a big oil truck. That is doubtless why you see so many oil trucks equipped with Kelly Kats.

The BIG Achievement



A complete line of Oil Engines

Single Cylinder Horizontal Oil Engines
50, 100, 150 HP

Vertical, Multi-Cylinder Stationary Oil Engines
105 to 1000 HP

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220 to 750 HP

Direct-Connected, Horizontal Oil Engine—Air and Gas Compressors

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Send for illustrated Catalogs—

INGERSOLL-RAND 50 HP AND 100 HP STATIONARY OIL ENGINES

Simple, Rugged, Efficient, Reliable.

A small engine which makes for big savings.

Four cycle, horizontal, having direct-injection of fuel. Starts cold. No high pressure injection air compressor and piping. No hot bulbs or electrical ignition.

A small oil engine operating with full Diesel economy at any load. Burns any fuel oils that can be used in any Diesel engine. Burns *all* oil injected into cylinder—thus insuring *sustained* high over-all efficiency. No pulling of pistons, no scraping of valves, no needless wear.

Let our engineers explain the details and convince you of the savings.

INGERSOLL-RAND COMPANY-11 BROADWAY, NEW YORK CITY.
Offices in all principal domestic and foreign cities.

Ingersoll-Rand

FIVE SETS OF CHASERS THREAD ALL THE PIPE FOR AN OIL FIELD

An 8″ Landis Pipe Threading Machine and **five sets of chasers** thread all the pipe used in the Signal Hill Oil Fields, Long Beach, California.

The Landis Machine is shown threading 6″ Drill Pipe, threads 3½″ long, 8″ pitch, ¾″ taper per foot. Using the 8″ die head shown, 4″ and 6″ Drill Pipe as well as 4″ to 8″ Line Pipe is threaded with one set of chasers. Casing from 4¼″ to 8¼″ is also threaded with one set of chasers. With a 4″ head the Landis Machine threads 2½″ and 3″ Drill Pipe and 2½″ to 4″ Line Pipe. Using **five sets of chasers** in all.

Machines that fill exacting demands in the oil fields deserve the consideration of all users of threaded pipe. Let us give you complete information.

LANDIS MACHINE COMPANY, Inc.

Waynesboro, Pa., U. S. A.

DOMESTIC AGENTS:

Marshall & Huschart Machinery Co., Chicago, Ill.

Marshall & Huschart Machinery Co. of Indiana, Indianapolis, Ind.

Colcord-Wright Machinery & Supply Co., St. Louis, Mo.

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Herberts Machinery & Supply Co., San Francisco and Los Angeles, Calif.

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BRASS GATE VALVES

The Walworth line of brass gate valves has been designed to cover every requirement ordinarily met with in steam and water installations.

This completeness is typical of Walworth's many other lines of valves in other metals and for other services.

WALWORTH

A brass gate valve that is "good almost anywhere" —Wedge Gate type Non-Rising Stem with Gland.

For 125 pounds

"FEDERAL"

Can be repacked under pressure when fully open. Furnished with ventilated hand wheel.

Steam Pressure

WALWORTH MANUFACTURING CO., Boston, Mass.

Chicago, Cleveland, Glasgow, Kewanee, Ill., London, New York, Philadelphia, Portland, Seattle, San Francisco, Youngstown.
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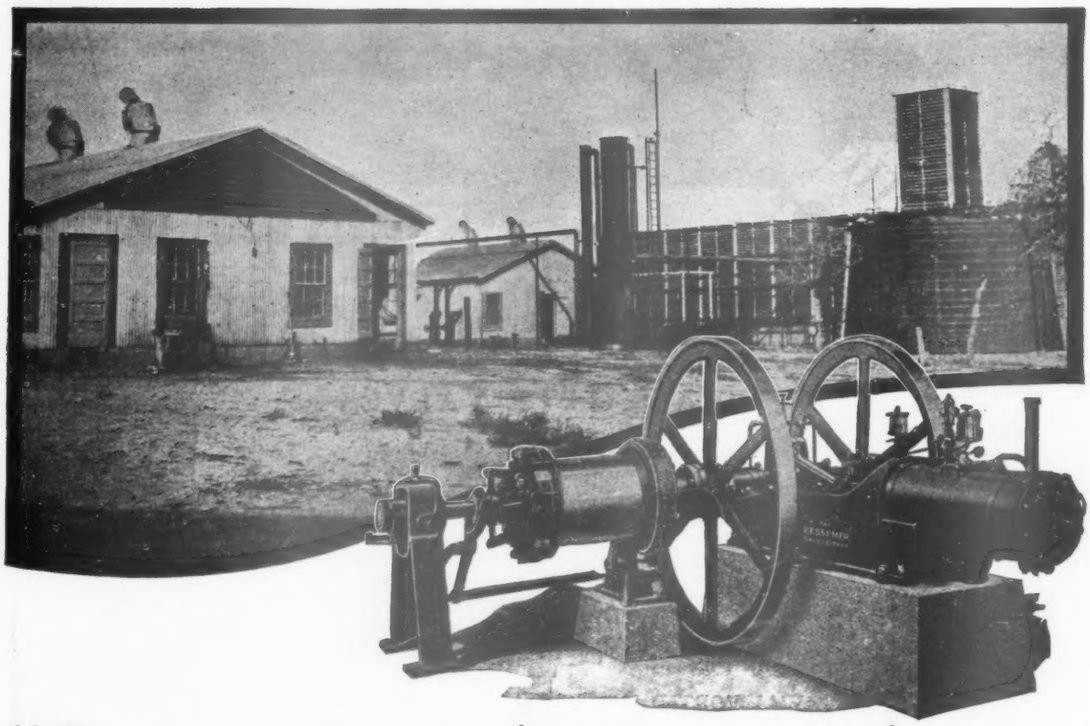

"Our engines have sure been 'balling the Jack'!"

said a typical Bessemer operator in Arkansas the other day to a tenderfoot visitor from the East and the eastern man had to ask further questions in order to learn that *'balling the Jack'* is a term of high praise.

The comment is typical.

No matter into what oil field you go you will find Bessemer operators praising them in the terms of each particular locality, all confirming our repeated statement that—

"You buy the best when you buy the Bessemer"

THE BESSEMER GAS ENGINE COMPANY
52 York Street ⁂ ⁂ Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Axelson Machine Company

General Offices and Western Factory: Los Angeles, Cal.

Mid-Continent Offices: 1023 Kennedy Bldg., Tulsa, Oklahoma.

Casper, Wyoming Office: With Frick-Reid Supply Co. Mid-Continent Sales Distributors: Frick-Reid Supply Co.

Rolls-Royces and Axelson Pumps Lead 'Em All In There Respective Fields! Why?

Performance!

There's Your Answer!

Why American Vapor Proof Segment Bolted Tanks Have No Equal:

AMERICAN TANK CO. TRADE Quality MARK WHOLESALE RETAIL

1. The only tank with *real standardized interchangeable parts.*
2. The *segment bottom* and *top* with the regular bracing makes a stronger tank than the ordinary.
3. *All American Tanks* are made of *copper alloy steel* which is The longest life steel made.
4. They not only *hold the oil* without leaking, but they hold it to its original gravity and prevent evaporation.
5. *American Vapor Proof Segment Bolted Tanks* are painted *light grey.* The Bureau of Mines reports show that evaporation from tanks painted light grey average from 1% to 2% less than from tanks painted any of the dark colors.
6. The American Gas-Tight equipment is the most efficient and practical to be had.

The American Special B. S. Cleanout Plate is removed and replaced from the outsid, permitting efficient cleaning without entering tank.

American Quality Products:

—Oil Refining Equipment
—Bolted Steel Tanks
—Welded Steel Tanks
—Jay Walker Gas Trap
—Truck Tanks
—Dump Bodies
—Wood Hydraulic Hoists
—Condenser Boxes
—Absorbers
—Agitators
—Pressure Tanks
—Redwood Tanks
—Filling Station Tanks
—Fuel Oil Storage Tanks

(Check your requirements on this list—tear out and mail it to us now.)

AMERICAN TANK COMPANY

Oklahoma City, Okla.

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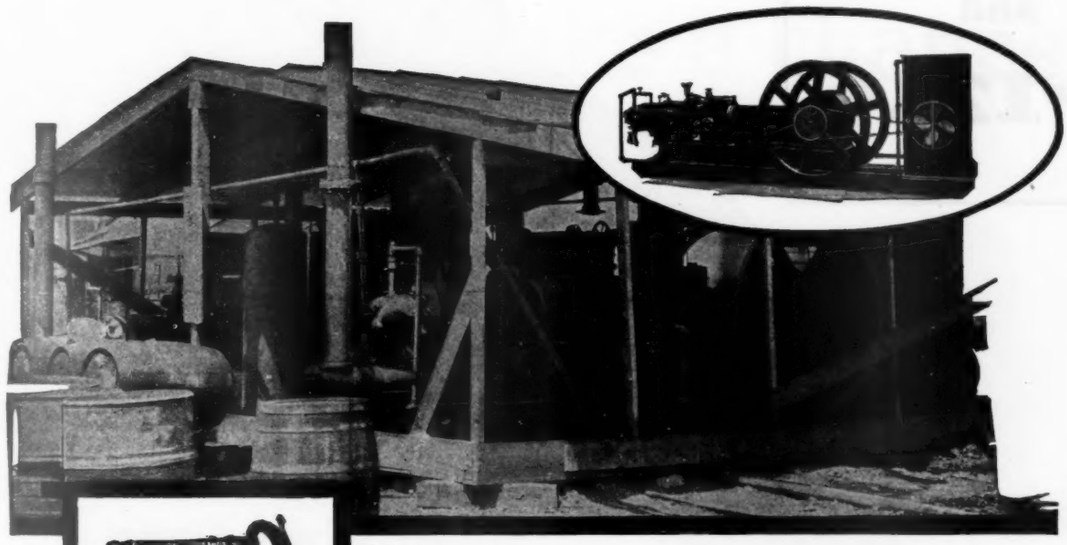

Boyer Riveting Hammers

Boyer Hammers give least cost per rivet driven service wherever used. Their rapid powerful blows drive rivets perfectly. Three-unit construction and long-wearing parts keep maintenance costs on an economy basis. Request Bulletin.

The Chicago Bridge and Iron Works use Type N-SO2 CP Compressors. This type compressor is oil-powered; equipped with Simplate Valves; is self-lubricating and has other CP economy features. Stationary and portable types. Request bulletin.

Boyer Hammers Make Perfect Tanks for this Company

THREE hundred and thirty-six "7-Ring-80" oil tanks, ample storage for one-twentieth of the nation's annual oil production, were Boyer Built by the Chicago Bridge and Iron Works in fifteen months.

Wide experience in building oil tanks, gas holders, water towers, pen-stocks and many other steel plate products led this company to standardize on the Chicago Pneumatic Tools they now use.

Boyer Hammers build their tanks in a hurry, economically and leak-proof. CP Compressors (with Simplate Valves) give them dependable compressed air service with minimum operating costs.

There is a specific size or type of CP Compressor or Boyer Hammer best suited to your requirements. They will give you a year-after-year service of reliability and real economy.

Chicago Pneumatic Tool Company

6 East 44th Street, NEW YORK, N. Y.

CP Products are stocked at Tulsa, Okla., 23 East Brady Street

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Canadian Pneumatic Tool Company, Ltd., Montreal, manufacturers of Chicago Pneumatic products in Canada
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CHICAGO PNEUMATIC AIR COMPRESSORS · · VACUUM PUMPS · · PNEUMATIC HOISTS
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Depend upon that Name

SS-40+

and

SS-124+

A Light Chain for Your Engine Drive

SS-40 PLUS and SS-124 PLUS are known wherever hard drilling is done. They have made new records for chain service.

Only one calling card goes in the oil fields—and that bears the label of PERFORMANCE.

These chains of ruggedness-plus were well known in the designing rooms, laboratories and plants of Link-Belt, long before they had been tried out in the field.

They had won the double >——< arrow—Link-Belt's chain mark of quality.

Their super strength is a tested fact.

Drillers—you can now specify a chain *for the highest speeds ever marked in drilling;* a light chain for your engine drive.

SS-40 PLUS is *no heavier* than its famous predecessor, SS-40; and SS-124 PLUS no heavier than SS-124—and you have a combination for *economy-plus.*

Claims are easy to publish—but this is a fact—SS-40 PLUS is 60% stronger than SS-40, and SS-124 PLUS is 73% stronger than SS-124.

SS-40 PLUS and SS-124 PLUS are now available to every driller.

LINK-BELT COMPANY INDIANAPOLIS

Leading manufacturers of Elevating, Conveying and Power Transmission Chains

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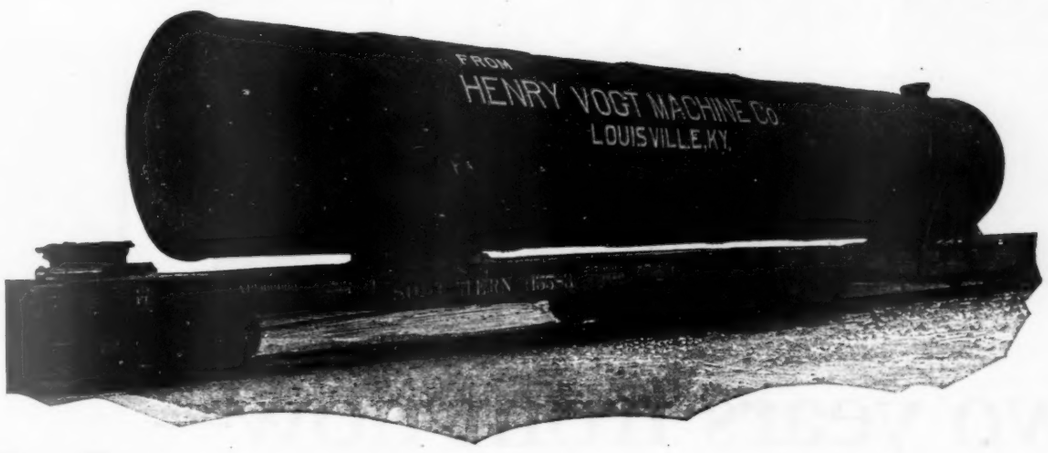
LINK-BELT

They didn't take a chance



Vogt Stills were ordered

SPECIFICATION

Size — 10′ dia. x 60′ long

Plate Thickness — ⅞", 1" and 1⅛"

Rivets — 1¼" swelled neck

Operating Conditions — 100 lb. @ 800° F.

Test Pressure — 225 pounds

Shipping Weight — 107,500 pounds

Low carbon open hearth still-bottom steel.

Edges of all plates machined on plate planer — not bevel sheared.

Circumferential joints assembled by expansion and contraction method.

Rivet holes drilled from solid plates after assembly.

Seams electrically welded inside and outside — instead of calked.

THE men responsible for the purchase of equipment at this large eastern refinery knew that they could not afford to buy other than the best. They realized that destruction of property and loss of life frequently result from apparently slight defects in such high pressure and high temperature stills.

They also realized that every so-called boiler shop is not competent to build stills — that special equipment and an organization trained up to that high grade workmanship (see specification) is necessary to produce stills that will not require frequent and expensive repairs to keep them tight. This is another reason why they ordered Vogt Stills.

And they didn't take a chance upon costly delays in their construction program due to failure of the manufacturer to complete the stills as required. They were confident, when they signed the contract, that the stills would be completed as specified. Their confidence was not misplaced. The promised shipment was anticipated almost three weeks.

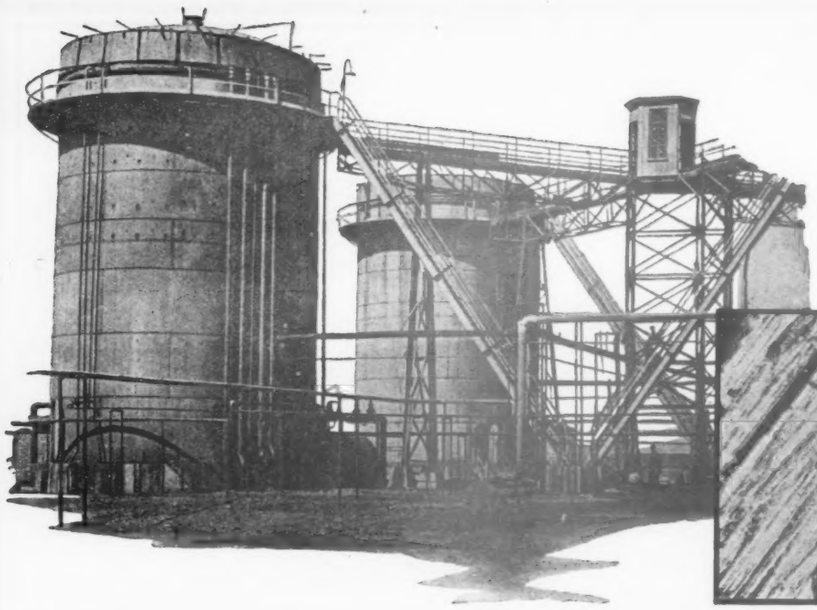
HENRY VOGT MACHINE CO.

Incorporated

LOUISVILLE, KENTUCKY

Branch Offices: NEW YORK, CHICAGO, PHILADELPHIA, DALLAS

Manufacturers of Oil Refinery Equipment, Water Tube and Horizontal Return Tubular Boilers Drop Forged Steel Valves and Fittings, Ice Making and Refrigerating Machinery.



"A"—an unretouched photomicrograph showing what rust does to an unprotected metal surface. The diagonal lines are file marks made in preparing the specimen cross section for the microscope.

"B"—an unretouched photomicrograph of a metal surface protected by the standard three-coat covering of red-lead. Note the perfect condition. Rust has not formed.

Two years from now—

will your metal be like "A" or "B"?

AT one refinery, paint protects the steel sides of the stills. As a result, the metal looks like that in plate "B." At a neighboring refinery, where the stills are unpainted, rust is eating away the metal. The weakened, scarred metal still stands, but the metal looks like the "A" plate.

Your refinery metal will be like "A" or "B" as you neglect it or keep it protected.

Keep red-lead on your tanks

You may take a chance with your tanks and neglect to give them adequate paint protection. But rust won't neglect the metal in those tanks. Your neglect will cost you dearly unless you give your tanks adequate assistance in their battle against rust.

By using Dutch Boy red-lead you place on your tanks pure red-lead. This red-lead is a finely ground and uniform pigment. It makes a paint that spreads far and produces a tough, elastic film impervious to air and moisture. It gives long protection and cuts cost of repainting to a minimum.

Dutch Boy red-lead keeps metal like "B"

Dutch Boy red-lead supplies complete protection against rust to tanks and metal surfaces wherever used in the oil industry. You can get Dutch Boy red-lead both in paste form for mixing with pure linseed oil and as a liquid ready for immediate application. Both come in the natural orange-red color usually used next to the metal. The *liquid* comes also in black, greens, and browns for finishing coats. The *paste* can be shaded to black, browns, greens, etc.

White-lead to keep tanks cool

Dutch Boy white-lead put on top of Dutch Boy red-lead gives a light finishing coat that reduces heat absorption by the metal and decreases evaporation of the stored oil or gasoline. Dutch Boy white-lead has all the properties that enable it to resist the penetration of air and moisture and guard your tanks against rust.

For specific information on rust-resisting paint coats, address:

Save the surface and you save all

NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 131 State Street; Buffalo, 116 Oak Street; Chicago, 900 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 722 Chestnut Street; San Francisco, 485 California Street; Pittsburgh, National Lead & Oil Co. of Penna., 316 Fourth Avenue; Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street.

LITHARGE

We also make litharge of the correct physical character and chemical purity for oil refining. You can rely on its unvarying uniformity at all times. Our nearest warehouse can give you quick shipment.

DUTCH BOY RED-LEAD

The fluxing qualities of the slag in wrought iron are responsible for the knitting of the metal at the weld.
On this test the wall of the pipe broke at this point.

This Test Proved the Superiority of Lap-Welded Genuine Wrought Iron Tubing

A RING cut from a piece of doubly-welded Reading Tubing, flattened out and tested for transverse tensile strength of weld, proved that the weld is stronger than the remaining wall of the pipe. The pressure applied on this test was 19 tons.

Reading Tubing is thoroughly resistant to rust and crystallization. It has this quality plus a dependable weld, the strength of which makes it better than any seamless pipe manufactured.

Buy Reading Tubing for your next operation—convince yourself of its merit. Oil men who are using it will not hesitate to testify to the value of "Reading."

READING IRON COMPANY
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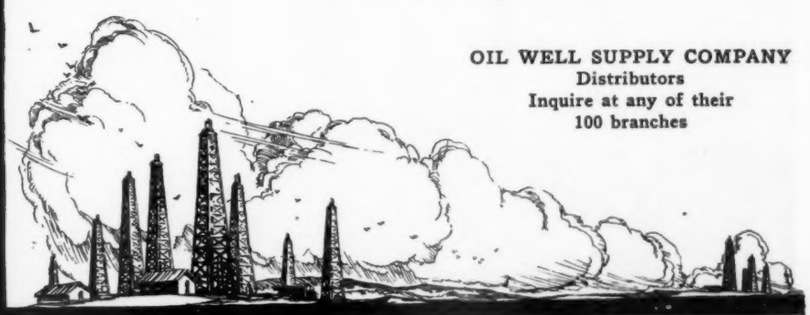
World's Largest Producers of Genuine Wrought Iron Pipe



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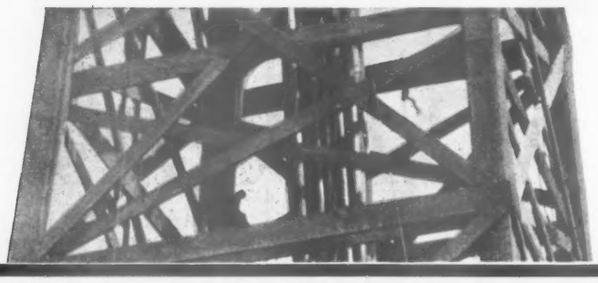

"I Do Not Feel That I Can Recommend South Chester Too Highly"

And there are many other deep well drillers who share the opinion of W. W. Stabler, General Manager of the Globe Petroleum Corporation who writes:

"On the well formerly known as the Stabler Oil Co. No. 1 and now known as the Southwest Petroleum Co. No. 1, on Section 28-31-24, M. D. B. & M., near Taft, I take pleasure in informing you that we have landed a string of 43-lb. 8¼" South Chester casing, 8 thread successfully shutting off the water at 4,530 feet.

"We subjected this casing to a very severe test. We started the pipe in the hole once and it hung up on account of the hole caving at 3,600 feet. We pulled out and set it back in the derrick and had to clean the hole out and redrill. And after running it in to about 3,800 feet, it was necessary to circulate the singles all the way in. We had eleven lines up and the pipe was nearly frozen a dozen times. We pulled with all the power we had, but had no trouble at all with the casing. In fact during the whole operation we did not spoil one thread and I want to put myself on record as saying that it was the most satisfactory string of 8¼ casing I have ever used in the operations of any of my companies. I do not feel that I can recommend 43-lb. 8 thread 8¼ South Chester too highly."

The worth of Chester Steel Casing is proven by exceptional service records day by day in the oil fields.

Our distributors carry a complete range of stock.

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Also Makers of Wrought Iron Casing From 4½" to 12½" Sizes

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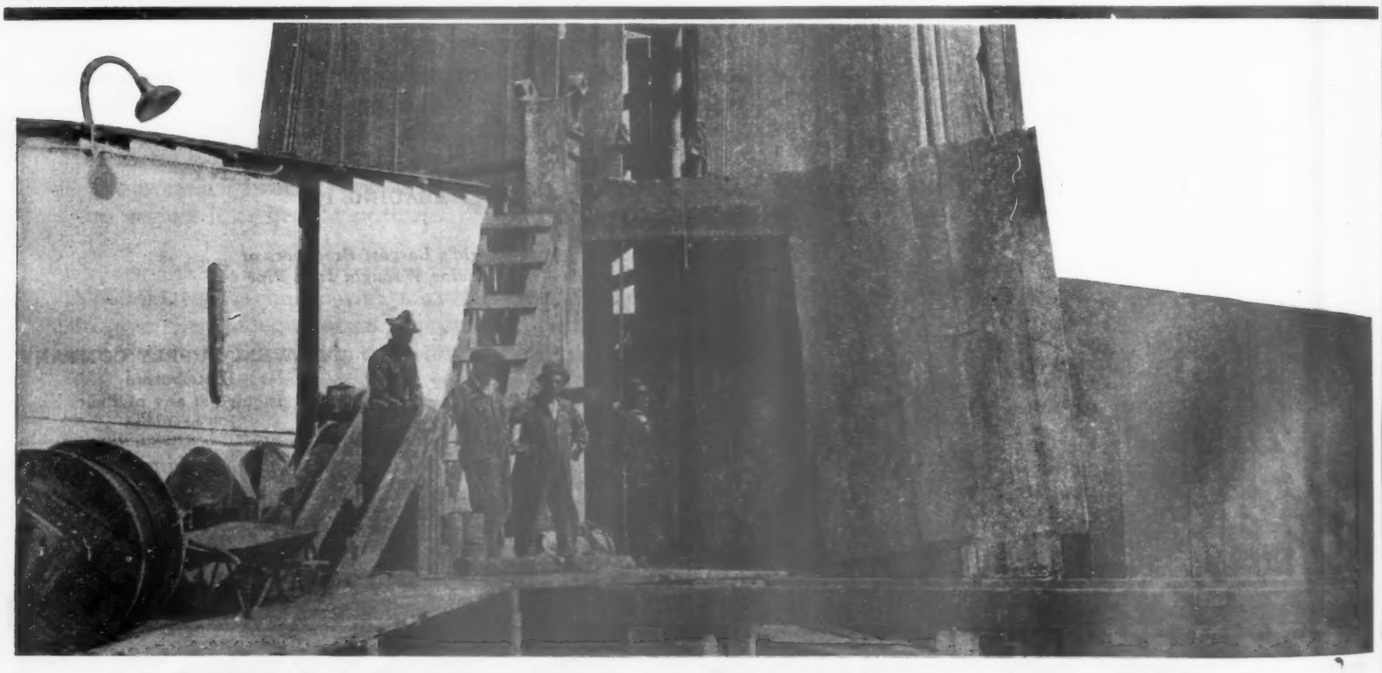

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SPECIALISTS IN CASING FOR DEEP WELL DRILLING

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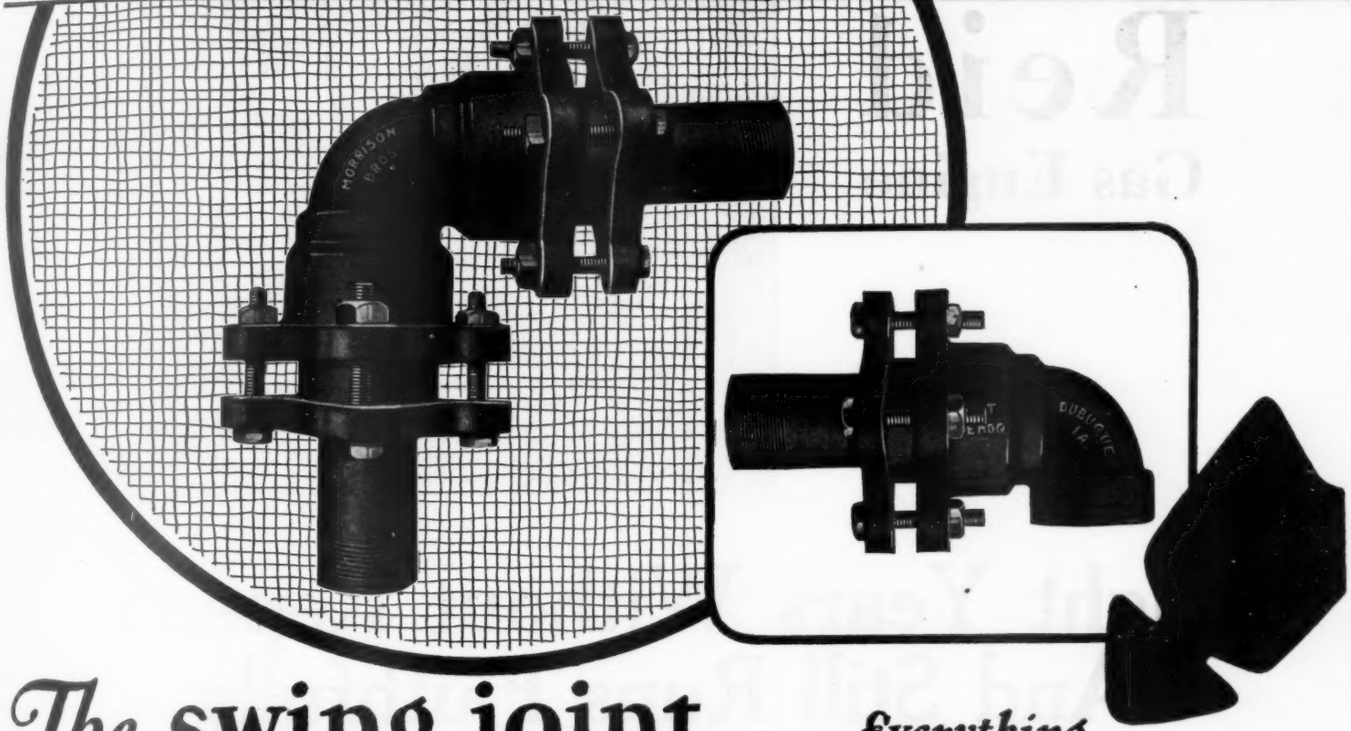

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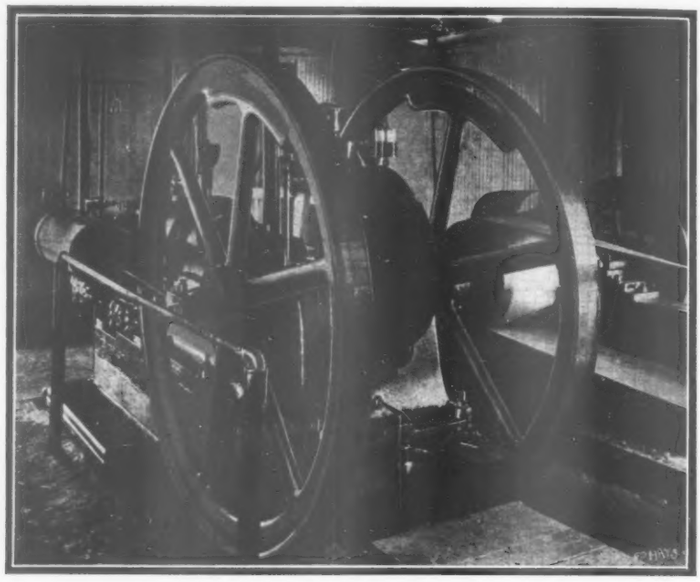

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